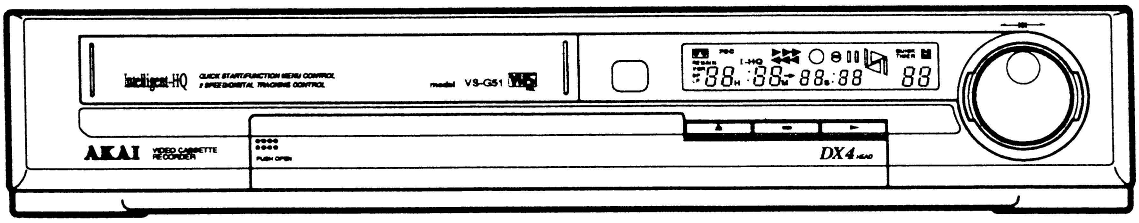
AKAI SERVICE MANUAL


Intelligent-HQ
VS-G51
AKAI VIDEO CASSETTE RECORDER
PUSH OPEN
DX4 HEAD

MODEL VS-G51EOH

VIDEO CASSETTE RECORDER

MODEL VS-G51 EA/EDG/EM EO/EOH

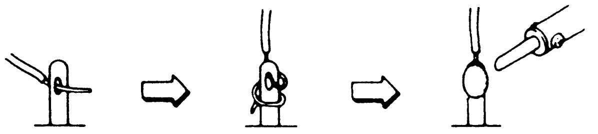
MODEL VS-G54 EOH-V

MODEL VS-G55 EOG-V

★SAFETY INSTRUCTIONS

PRECAUTIONS DURING SERVICING

1. Parts identified by the ⚠ (*) symbol are critical for safety. Replace them only with the parts number specified.
2. In addition to safety, other parts and assemblies are specified for conformance with such regulations as those applying to spurious radiation.
   These must also be replaced only with the specified replacements.
   Examples: RF converters, tuner units, antenna selector switches, RF cables, noise blocking capacitors, noise blocking filters, etc.
3. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads
4. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape
   2) PVC tubing
   3) Spacers (insulating barriers)
   4) Insulation sheets for transistors
   5) Plastic screws for fixing micro switches
5. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.), wrap the ends of the wires securely around the terminals before soldering.



6. Make sure that wires do not contact heat producing parts (heat sinks, oxide metal film resistors, fusible resistors, etc.).
7. Check that replaced wires do not contact sharp edged or pointed parts.
8. Also check areas surrounding repaired locations.
9. Make sure that foreign objects (screws, solder droplets, etc.) do not remain inside the set.

SAFETY CHECK AFTER SERVICING

After servicing, make measurements of leakage-current or resistance in order to determine that exposed parts are acceptably insulated from the supply circuit.
The leakage-current measurement should be done between accessible metal parts (such as chassis, ground terminal, microphone jacks, signal input/output connectors, etc.) and the earth ground through a resistor of 1500 ohms paralleled with a 0.15 µF capacitor, under the unit's normal working conditions.
The leakage-current should be less than 0.5 mA rms AC.
The resistance measurement should be done between accessible exposed metal parts and power cord plug prongs with the power switch (if included) "ON". The resistance should be more than 2.2 M ohms.

MAKE YOUR CONTRIBUTION TO PROTECT THE ENVIRONMENT

Used batteries with the ISO symbol for recycling as well as small accumulators (rechargeable batteries), mini-batteries (cells) and starter batteries should not be thrown into the garbage can. Please leave them at an appropriate depot.

★ SPECIFICATIONS

Format	
EA	VHS standard
EDG/EM/EO/EOH/ EOH-V/EOG-V	VHS standard (PAL, MESECAM)
Video recording system	Rotary, slant azimuth two-head helical scan system
Rotary heads	4 video heads
RF input	
EA	System B, G VHF ch 0 - 5, 5a, 6 - 11 UHF ch 21 - 69
EDG	System D, K VHF ch1 - 12, UHF ch 21 - 69 System B, G VHF ch 2 -12, UHF ch 21 - 69 Cable ch S1'- S3', S1 - S20
EM	System B, G (PAL, SECAM) VHF ch 2 -12, UHF ch 21 - 69
EO/EOG-V	System B, G (PAL, SECAM) VHF ch 2 - 4, 5 - 12 UHF ch 21 - 69 Cable ch S1' -S3', S1 - S20
EOH/EOH-V	System B, G (PAL, SECAM) VHF ch 2 - 4, 5 - 12 UHF ch 21 - 69 Cable ch S1' - S3', S1 - S41
RF output	
EA	System B type modulation VHF ch 0, 1 switchable (preset ch 1)
EDG	System K/G type modulation UHF ch 30 - 39 adjustable (preset ch 36)
EM	System B type modulation VHF ch 3, 4 switchable (preset ch 4)
EO/EOG-V/EOH/EOH-V	System G type modulation UHF ch 30 - 39 adjustable (preset ch 36)
Recording (line input)	
EA	PAL
EDG/EM/EO/EOG-V/ EOH/EOH-V	PAL, SECAM (recorded as MESECAM)
Playback (line output)	
EA	PAL
EDG/EO/EOG-V/ EOH (E)/EOH-V	PAL, SECAM (MESECAM Tape)
EM/EOH (Y1)	PAL, SECAM (MESECAM tape) NTSC 4.43 (NTSC tape) Simulated PAL (NTSC tape playback only)
Video	
Line input level	0.5 - 2.0 Vp-p/75 ohms unbalanced
Line output level	1.0 Vp-p/75 ohms, unbalanced
S/N ratio	More than 45 dB
Horizontal resolution	More than 250 lines

Audio	
Line input level	– 6 dBs/50 k ohms, unbalanced
Line output level	– 6 dBs/1 k ohms, unbalanced
S/N ratio	More than 40 dB
Frequency response	70 - 10,000 Hz
Recording/playback time	
SP mode	240 min. with E-240 cassette
LP mode	480 min. with E-240 cassette
NTSC playback only (EOH (Y1)/EM)	
SP mode	160 min. with T-160 cassette
EP mode	480 min. with T-160 cassette
Tape speed	
SP mode	23.39 mm/sec.
LP mode	11.695 mm/sec.
NTSC playback (EOH (Y1)/EM)	
SP mode	33.35 mm/sec.
EP mode	11.12 mm/sec.
Quick finder	
SP mode	Approx. 5 or 13 times normal speed
LP mode	Approx. 3 or 7 times normal speed
NTSC playback only (EOH (Y1)/EM)	
SP mode	Approx. 5 or 9 times normal speed
EP mode	Approx. 5 or 15 times normal speed
FF, REW time	Approx. 5 min. with E-180 cassette
Timer	
Program	
EA/EDG	8 programmes /1 year
Except EA/EDG	8 programmes /1 year and QUICK TIMER
Clock reference	Quartz crystal
Display	TV screen & FL (Tape counter, Timer etc.)
Power requirements	
EA	240 V AC, 50 Hz
EDG	220 V AC, 50 Hz
EM	110 -127 / 220 - 240 V AC 50/60 Hz
EO/EOG-V/EOH/EOH-V	220 - 230 V AC, 50 Hz
Power consumption	
EA/EM	36 W
EDG/EO/EOH/EOH-V	37 W
EOG-V	38 W
Operating temperature	5°C - 40°C
Dimensions	
EA/EDG	426 (W) x 82 (H) x 314 (D) mm
Except EA/EDG	426 (W) x 82 (H) x 323 (D) mm
Weight	5.0 kg

Standard accessories

Antenna cable	1
Remote control unit	1
Batteries for remote control	3
Operator's manual	1

0 dBs = 0.775 V

＊ For improvement purposes, specifications and design are subject to change without notice.

★INFORMATION

SYMBOLS OF MODEL NAMES FOR PRIMARY DESTINATION

The symbols below indicate the destination of each unit.

Symbol	Power Classification	Principal Destination	TV System	
			Color	Broadcast
EA	S	Australia	PAL	B,G
ED	E	China	PAL	D
EDG	E	East Europe	PAL	D,K
EDI	E	China, Hong Kong	PAL	D,K, I
EG	E	Spain, Nothern Europe, Other	PAL	B,G
	Y7	Saudi Arabia		
EK	B	U.K	PAL	I
	Y1	Hong Kong		
EM	E	Middle East	PAL	B,G
	Y7	Saudi Arabia		
EO	E	Holland, Switzerland, Nothern Europe	PAL	B,G
	V	Italy		
EOH	E	Holland, Belgium	PAL	B,G
	V	Italy		
EOG	V	Germany	PAL	B,G
ES	E	South Africa, Ireland, Hong kong	PAL	I
EV	E	South-East Asia	PAL	B,G
	U	Middle East, South -East Asia		
	Y1	New Zealand		
	Y7	Saudi Arabia		
EZ	S	New Zealand	PAL	B,G
EGN	E	Middle East	PAL,NTSC	B,G
	Y7	Saudi Arabia		
S	E	France	SECAM	L
SK	E	Latin America, Oceania, SECAM-OIRT	SECAM	K,K1
SEG	E	France, Switzerland	SECAM, PAL	L,B,G
U	A	U.S.A	NTSC	M
	C	Canada		
UM	U	Latin America	NTSC	M
J	J	Japan	NTSC	M

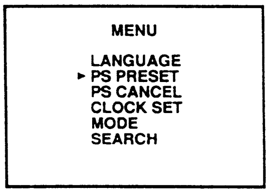
MULTI-FUNCTION MENU MODE

This is an on-screen display of the various modes you can programme via the TV screen.

LANGUAGE : To select a language for the on-screen displays.
PS PRESET : To preset TV stations.
PS CANCEL : To cancel preset TV stations.
CLOCK SET : To set the clock.
MODE : To select the BLANK SKIP PLAY, AV MUTE, ON SCREEN DISPLAY and VIDEO SYSTEM modes (VIDEO SYSTEM selection is not available on some models).
SEARCH : To select the BLANK SEARCH and INTRO SCAN modes.

If necessary, refer to the respective sections in the operator's manual for detailed information.

1. Press the "MENU" button on the remote control unit.
   The menu list screen will be displayed on the TV screen.
   The arrow indicator is automatically set to the "CLOCK SET" position (if the clock has been set already, arrow indicator will be set to the "MODE" position).



MENU

LANGUAGE
▸ PS PRESET
PS CANCEL
CLOCK SET
MODE
SEARCH

2. Select the desired mode by setting the arrow indicator to the appropriate position with cursor "∧" button.
   The arrow indicator moves upwards each time the button is pressed. Pressing the cursor "∨" button will move the arrow indicator downwards.

3. Press the "OK" button.
   The selected function screen will be displayed on the TV screen.

* Press the "MENU" button again to return to the normal screen.

MANUAL TRACKING/PICTURE/STABILITY ADJUSTMENT

The VCR can be adjusted for tracking and picture sharpness anytime it is in the playback mode with the remote control unit.

- **Manual tracking control**
  Press the "<" or ">" cursor botton repeatedly until the picture is clear. During manual tracking adjustment, the tracking position is shown on the TV screen, this will disappear automatically after adjustment has been completed. Use this function when performing the A/C HEAD phase adjustment.

- **Picture sharpness control**
  Press the "∧" button repeatedly to sharpen the picture or press the "∨" button to soften the picture.

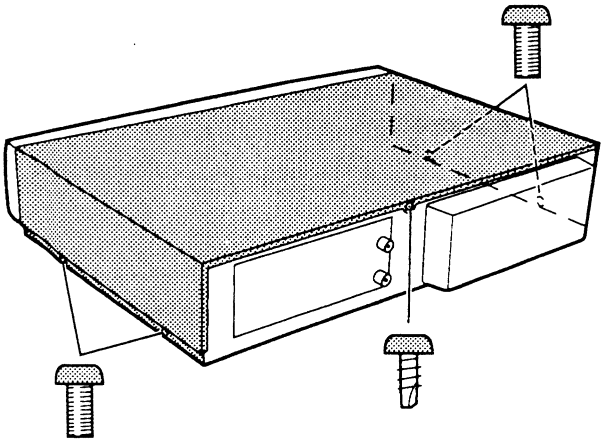
- **Stability adjustment**

1) To correct picture shake during the slow motion or still mode:
   Press "∧" or "∨" cursor button until the picture shake is corrected.
2) To correct tracking during the still mode:
   Press the "<" or ">" cursor button repeatedly until the picture is clear.

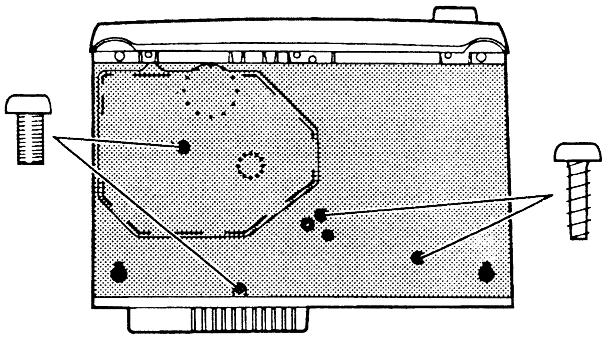
I. DISASSEMBLY

In case of trouble,etc., necessitating dismantling, please dismantle in the order shown in the illustrations. Reassemble in the reverse order.
When reattaching the FRONT PANEL, hold the cassette loading slot door in the upright (open) position.

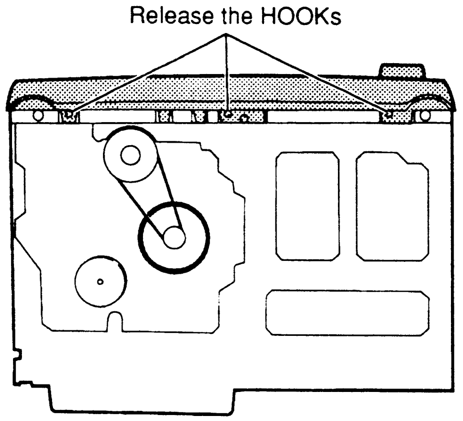
1. Removal of the UPPER COVER

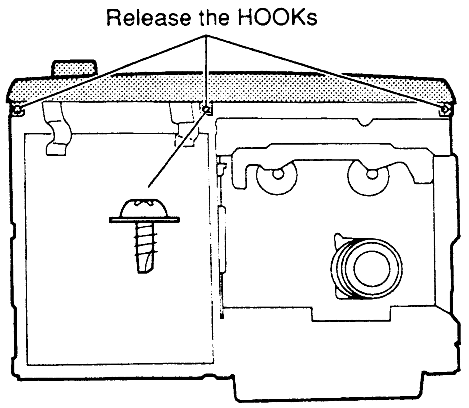


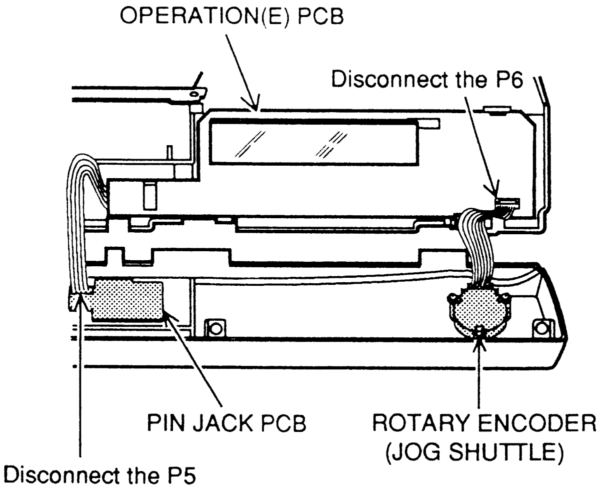
2. Removal of the BOTTOM COVER



3. Removal of the FRONT PANEL

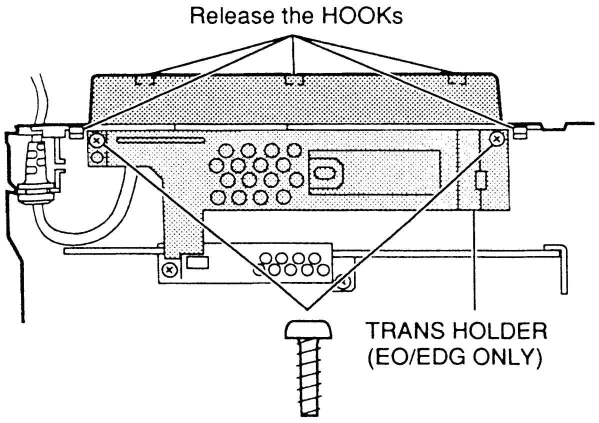

Release the HOOKs


Release the HOOKs


OPERATION(E) PCB
Disconnect the P6
PIN JACK PCB
ROTARY ENCODER
(JOG SHUTTLE)
Disconnect the P5

Disconnect the connector P6 on the OPERATION (E) PCB and P5 on the PIN JACK PCB.

4. Removal of the TRANS COVER


Release the HOOKs
TRANS HOLDER
(EO/EDG ONLY)

II. PRINCIPAL PARTS LOCATION

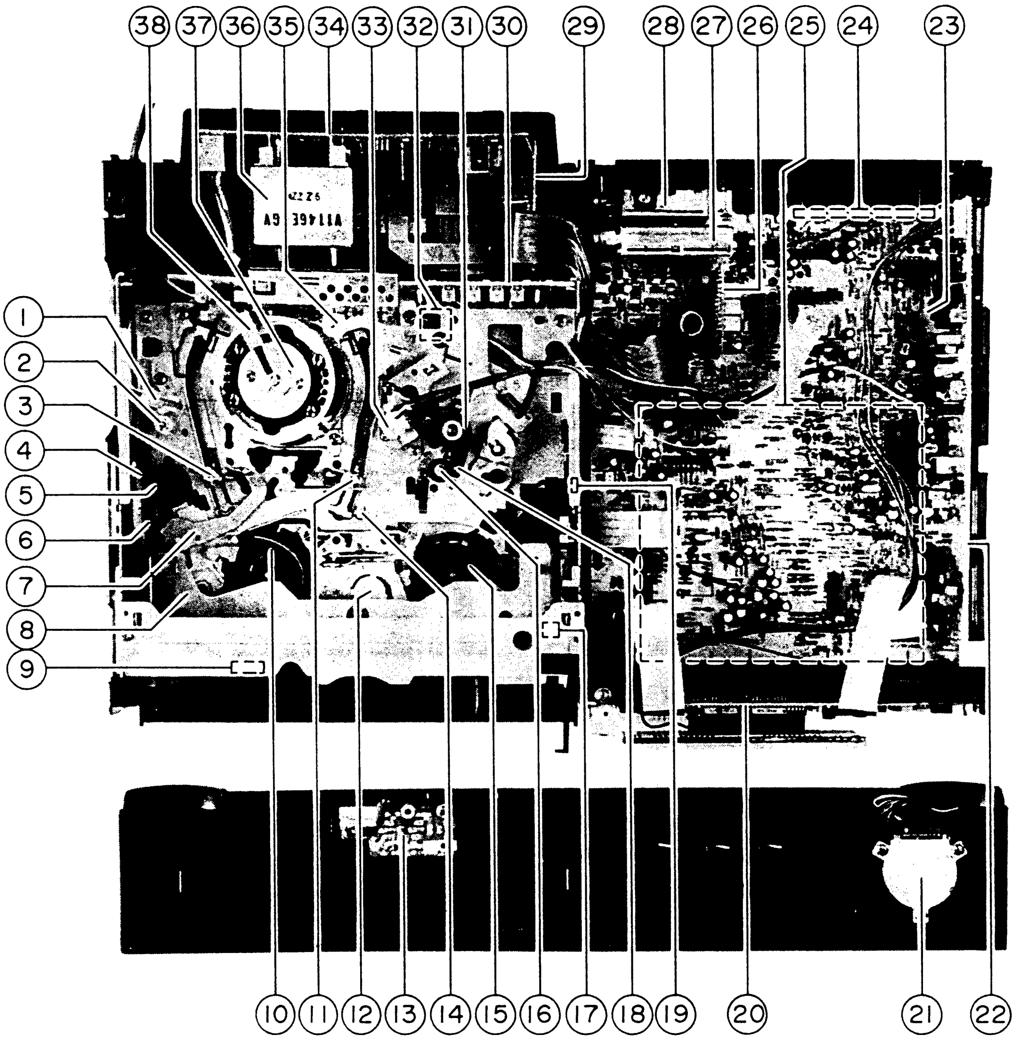


Fig. 2-1 Top view

1. FULL TRACK ERASE HEAD
2. SUPPLY TAPE GUIDE
3. SUPPLY LOADING LEADER
4. SENSOR (S) PCB (END SENSOR)
5. FRONT LOADING GEAR
6. FRONT LOADING SLIDER
7. TENSION ARM BLOCK
8. CASSETTE LOAD BLK
9. REC SAFETY SWITCH
10. SUPPLY REEL TABLE
11. TAKE UP LOADING LEADER
12. IDLER PART
13. PIN JACK PCB
14. SENSOR LED
15. TAKE UP REEL TABLE
16. CAPSTAN MOTOR
17. S-VHS TAPE DETECT SWITCH
18. REVIEW ARM PART
19. SENSOR (T) (START SENSOR)
20. OPERATION (E) PCB
21. ROTARY ENCODER (JOG SHUTTLE)
22. MAIN (B) PCB
23. MAIN (A) PCB
24. SUB PCB (EM only)
DECODER (1), (2) PCB (EOG-V only)
25. VPST/PDC PCB (EOG-V/EOH/EOH-V only)
26. VIF UNIT
27. TUNER UNIT
28. RF CONVERTOR UNIT
29. POWER SUPPLY (2) PCB (EM/EOG-V/EOH/EOH-V only)
30. PRE AMP PCB
31. PINCH ROLLER BLOCK
32. DIODE PCB (EM/EO only)
33. AUDIO/CONTROL/S.ERASE HEAD
34. POWER SUPPLY (1) PCB (EM/EOG-V/EOH/EOH-V only)
POWER SUPPLY PCB (EA/EDG/EO only)
35. HEAD CLEANER BLOCK
36. POWER TRANSFORMER
37. VIDEO HEAD DRUM BLOCK
38. EARTH BRUSH PART

∗ Photograph employed on this page is of model VS-G51EOH.

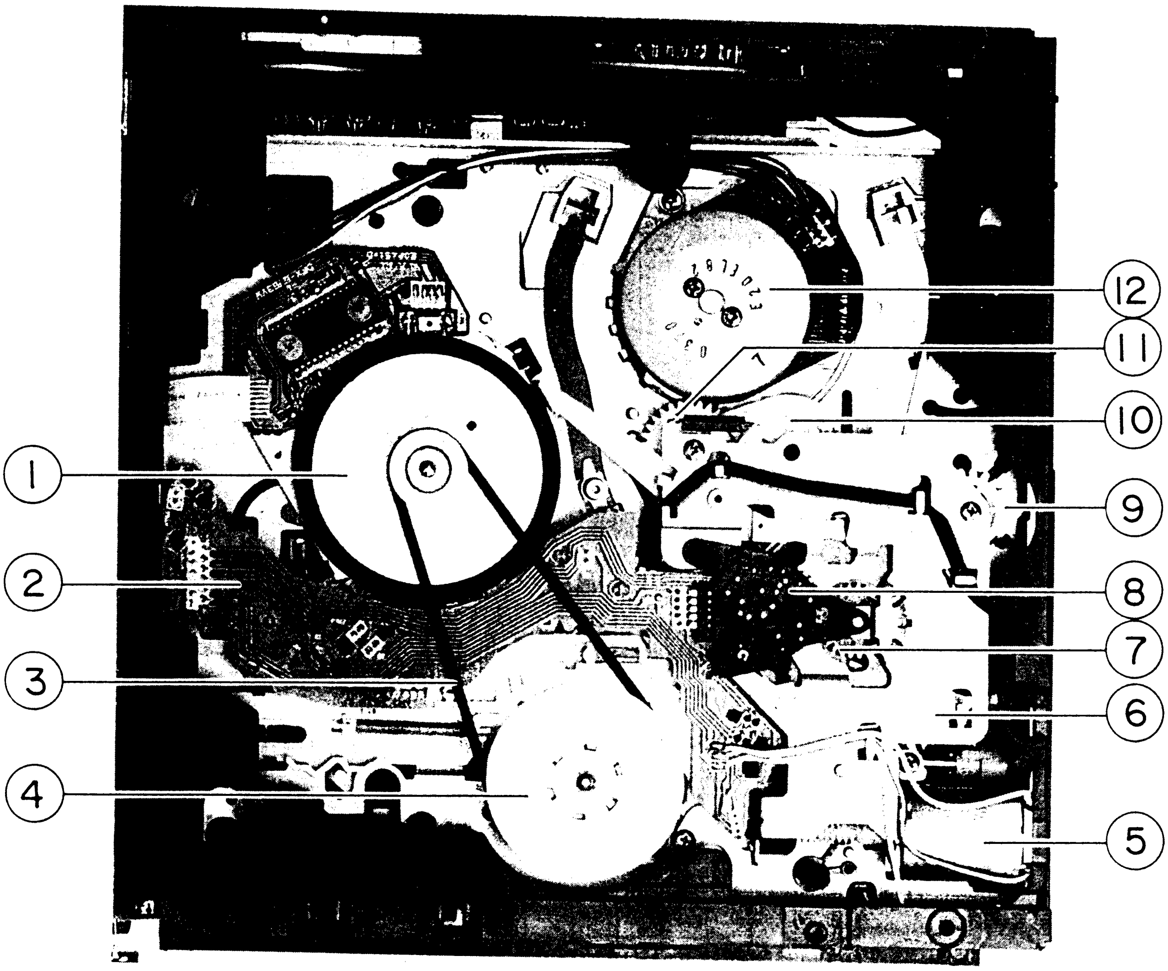


Fig. 2-2 Bottom view

1. CAPSTAN MOTOR BLOCK
2. SENSOR PCB
3. CAPSTAN BELT
4. CLUTCH DISK PART
5. LOADING MOTOR
6. LOADING DRIVE BLOCK
7. CAM SLIDER GEAR
8. MODE SELECT SWITCH
9. FRONT LOADING GEAR
10. TOGGLE (S) GEAR BLOCK
11. TOGGLE (T) GEAR BLOCK
12. DRUM MOTOR BLOCK

III. MAIN COMPONENTS REPLACEMENT

3-1. REMOVAL OF THE EJECTOR BLOCK

Set the loading mechanism to the "EJECT" position by pressing the EJECT button. Then disconnect the AC power plug from the AC socket before proceeding.

3-1-1. Removal of the CASSETTE LOAD BLK

1) Remove the two Ⓐ screws on the UPPER PLATE, as shown in Fig. 3-1 then remove the UPPER PLATE.
2) Lift up the FRONT GUIDE while pushing the CASSETTE LOAD BLK backwardS, then remove the FRONT GUIDE.
3) Gently lift up the front side of the CASSETTE LOAD BLK, then remove it. To avoid damaging the pins of the CASSETTE LOAD BLK and the groove of the MECHA.FRAME, do not use excessive force when removing the CASSETTE LOAD BLK.

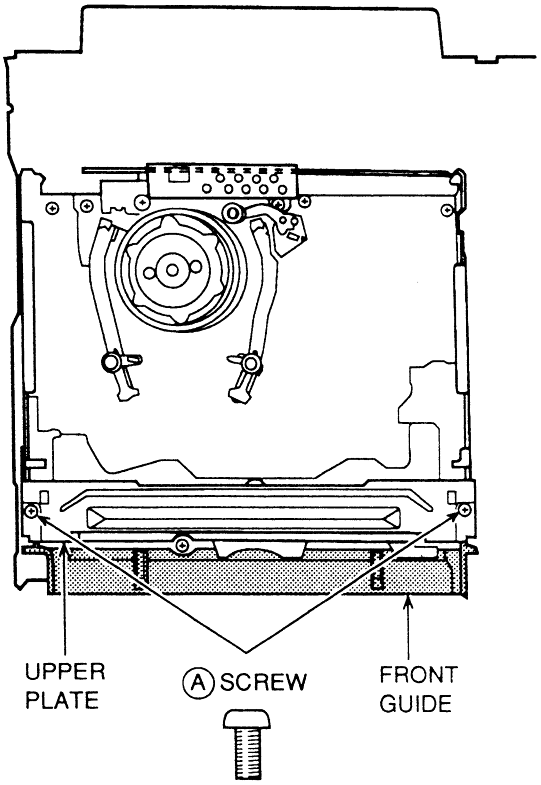


Fig. 3-1

3-1-2. Removal of the LOADING ARM BLK

1) Release the stopper on the right side end of the LOADING ARM BLK's shaft (Refer to Fig. 3-2) by pressing the stopper tab with a flat head (—) screwdriver. Then remove the shaft's right end from the bracket.

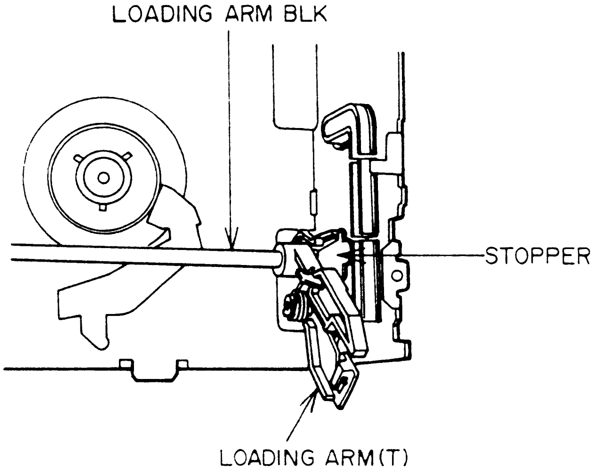


Fig. 3-2

2) Hold the LOADING ARM (T) and turn it 30 degrees clockwise, then pull out the shaft's left end from the bracket. Take special care when removing it to avoid damaging the JOINT and EJECT GEARs. (Refer Fig. 3-3)

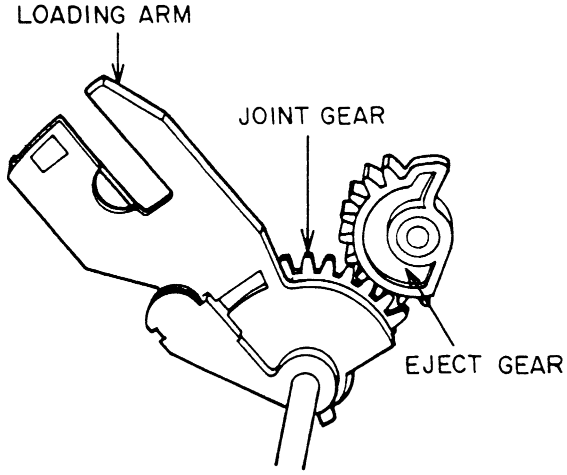


Fig. 3-3

3-2. REMOVAL OF THE SENSOR PC BOARD

* Before proceeding with removal of the SENSOR PCB, the loading mechanism must be set to the "unloaded" position (the position where the CAM SLIDER GEAR's groove mark is visible through the hole of the MODE SELECT SW.) as shown in Fig. 3-4.

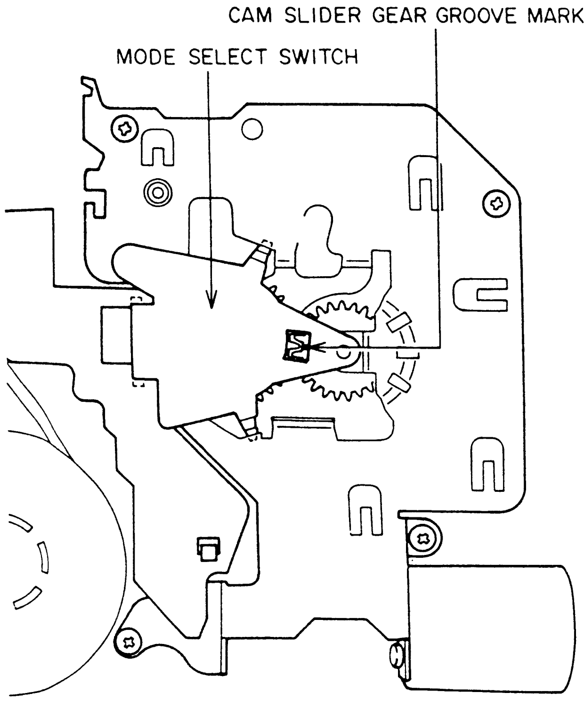


Fig. 3-4

To set the loading mechanism to the "unloaded" position, proceed with one of the following procedures.

1) Insert a video cassette tape which you no longer need. Once the tape has been loaded or has entered the "play" mode, press the POWER button to turn the power off. Disconnect the AC power plug from the AC socket after the cassette tape has been unloaded.
2) Remove the UPPER PLATE, FRONT GUIDE and CASSETTE LOAD BLK. (Refer to 3-1-1. Removal of the CASSETTE LOAD BLK.)
   Plug in the AC power cord. The LOADING ARM BLK will move backward and forward continuously. With your fingers, cover and hold both the SENSOR (S) and SENSOR (T) at the same time when the LOADING ARM BLK is in the backward position. The unit will enter the "play" mode without a cassette tape. Then release your fingers from both the sensors at the same time. After about 10 seconds (when the PINCH ROLLER is disengaged from the CAPSTAN and the SUPPLY REEL stops rotating), press the POWER button on the OPERATION PCB. The mechanism will be set to the "tape unloaded" position a few seconds later.
   Disconnect the AC power plug from the AC power socket.

3-2-1. Removal of the MODE SELECT SWITCH

1) Release the two Ⓐ stoppers as shown in Fig. 3-5.

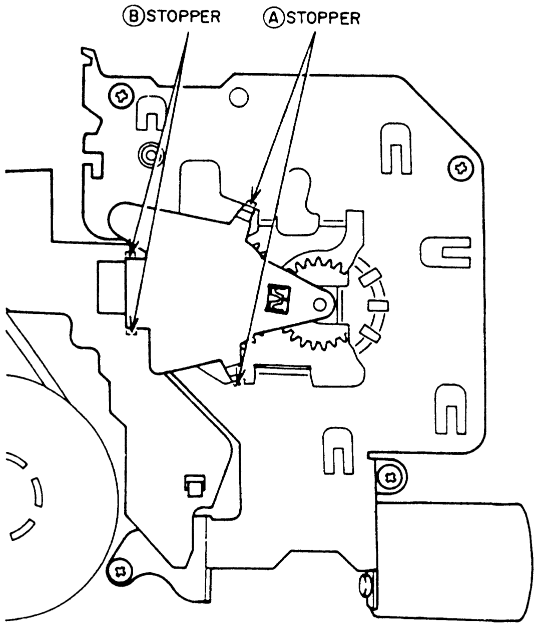


Fig. 3-5

2) Release the two Ⓑ stoppers carefully while pulling up the MODE SELECT SWITCH. Then remove the MODE SELECT SWITCH. (Do not damage the pins of the MODE SELECT SWITCH or the P1 connector on the SENSOR PCB).

3-2-2. Removal of the SENSOR PC Board

1) Disconnect the connector P303 on the MAIN (A) PCB.
2) Remove the capstan belt.
3) Release the Ⓐ, Ⓑ and Ⓒ stoppers as shown in Fig. 3-6. Then remove the SENSOR PCB.

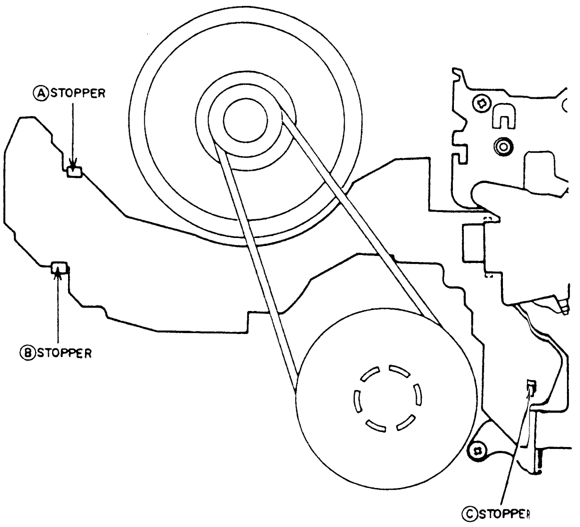


Fig. 3-6

3-3. REMOVAL OF THE LOADING DRIVE BLK

Set the loading mechanism to the "unloaded" position as well as 3-2 (REMOVAL OF THE SENSOR PC BOARD). However, this time, to avoid damaging the tape and mechanical parts, refer to 3-2, ✻ 2) only.

1) Remove the MODE SELECT SWITCH (refer to 3-2-1 Removal of the MODE SELECT SWITCH).
2) Unhook the five wires from each tab. Two wires from the SENSOR (S), two wires from the LOADING MOTOR and one wire from the REC SAFETY SWITCH.
3) Remove the Ⓐ, Ⓑ, Ⓒ and Ⓓ screws, then remove the LOADING DRIVE BLK as shown in Fig. 3-7.

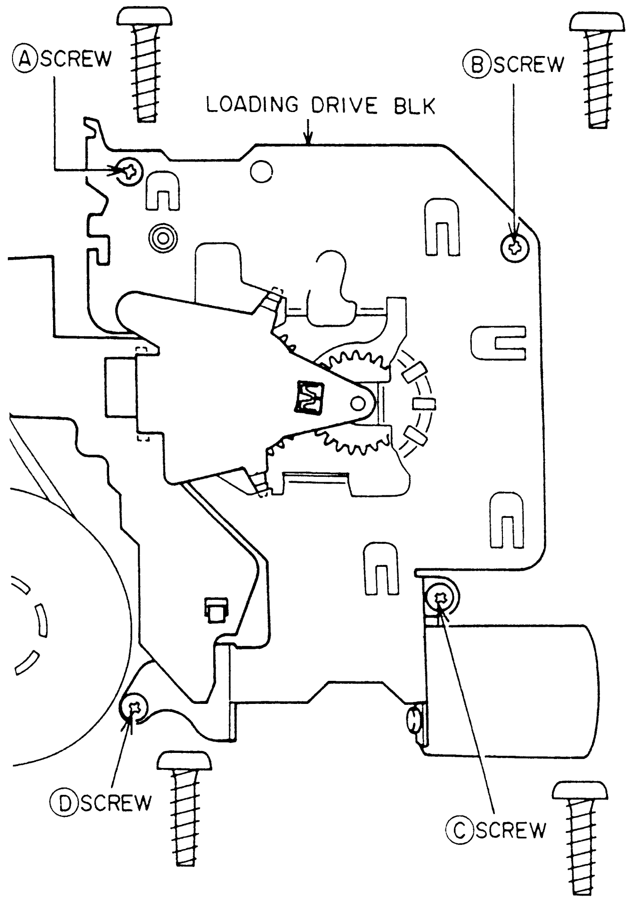

ⒶSCREW
ⒷSCREW
LOADING DRIVE BLK
ⒹSCREW
ⒸSCREW

Fig. 3-7

3-4. REASSEMBLY OF THE LOADING MECHANISM BLK

3-4-1. Position of the TOGGLE GEARs (T) and (S)

1) Set the TOGGLE GEARs (T) and (S) to the unloaded position with your fingers. Align the Ⓐ mark on TOGGLE GEAR (S) with the Ⓐ hole of TOGGLE GEAR (T) as shown in Fig. 3-8.

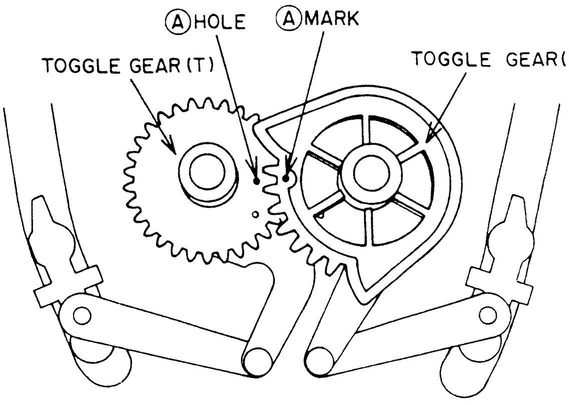

ⒶHOLE
ⒶMARK
TOGGLE GEAR (T)
TOGGLE GEAR(S)

Fig. 3-8

3-4-2. Installation of the CAM SLIDER GEAR & FRONT LOADING GEAR

1) Attach the WORM WHEEL GEAR as shown in Fig. 3-9.

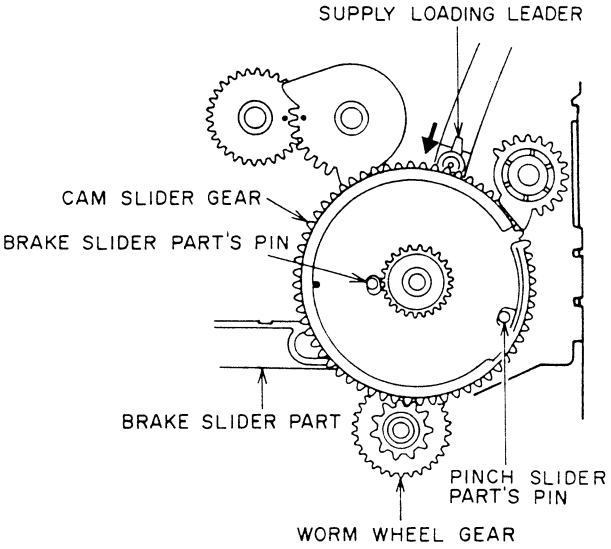

SUPPLY LOADING LEADER
CAM SLIDER GEAR
BRAKE SLIDER PART'S PIN
BRAKE SLIDER PART
PINCH SLIDER PART'S PIN
WORM WHEEL GEAR

Fig. 3-9

2) Set the CAM SLIDER GEAR and adjust the position of the BRAKE SLIDER PART and PINCH SLIDER PART so that both pins appear through the holes on the CAM SLIDER GEAR as shown in Fig. 3-9. When inserting the CAM SLIDER GEAR onto its shaft, press the SUPPLY LOADING LEADER slightly in the direction of the arrow to make installation easy.

3) Attach the FRONT LOADING GEAR as shown in Fig. 3-10 and align the Ⓑ mark on the FRONT LOADING GEAR with the Ⓑ hole of the FRONT LOADING SLIDER as shown in Fig. 3-11.

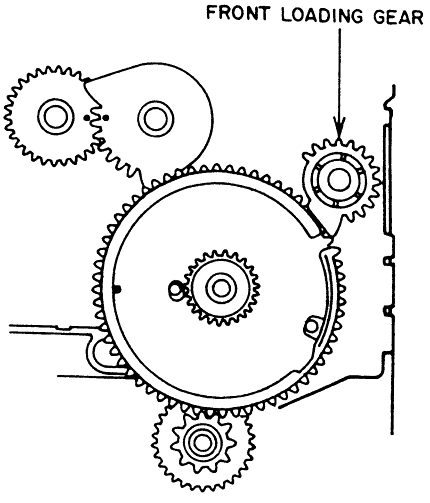

FRONT LOADING GEAR

Fig. 3-10

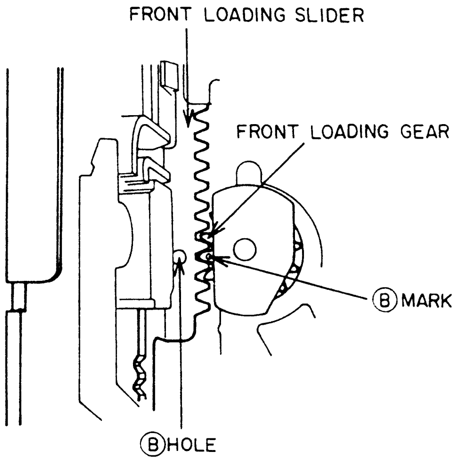

FRONT LOADING SLIDER
FRONT LOADING GEAR
Ⓑ MARK
Ⓑ HOLE

Fig. 3-11

3-4-3. Confirmation of the position of the EJECT GEAR

1) Confirm that the EJECT GEAR is in the correct position as shown in Fig. 3-12.

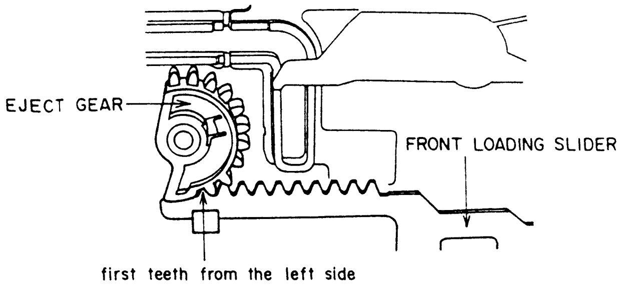

EJECT GEAR
FRONT LOADING SLIDER
first teeth from the left side

Fig. 3-12

2) Install the LOADING DRIVE BLK as shown in Fig.3-13.

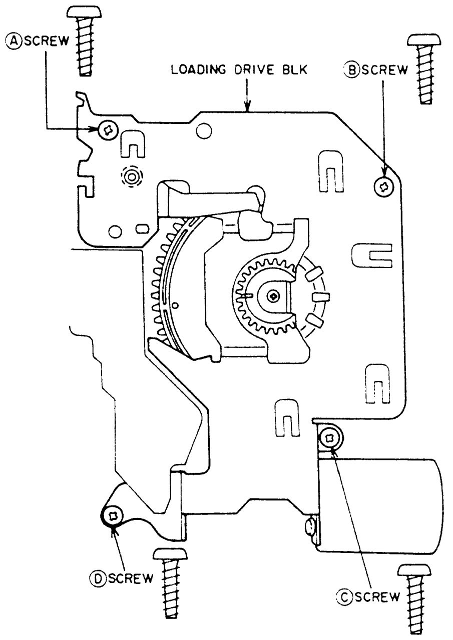

Ⓐ SCREW
LOADING DRIVE BLK
Ⓑ SCREW
Ⓓ SCREW
Ⓒ SCREW

Fig. 3-13

3-4-4. Installation of the MODE SELECT SWITCH

1) Set the MODE SELECT SWITCH's gear, so that the Ⓒ mark is in the center of the Ⓒ hole as shown in Fig. 3-14.

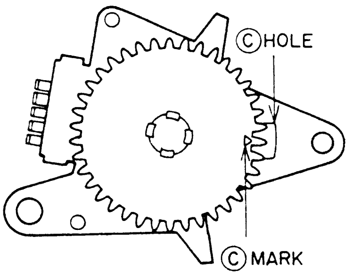


Fig. 3-14

2) Attach the MODE SELECT SWITCH to the LOADING DRIVE BLK and align the hollow of the gear's tooth (reverse side of the Ⓒ mark) with the Ⓒ groove of the CAM SLIDER GEAR as shown in Fig. 3-15.

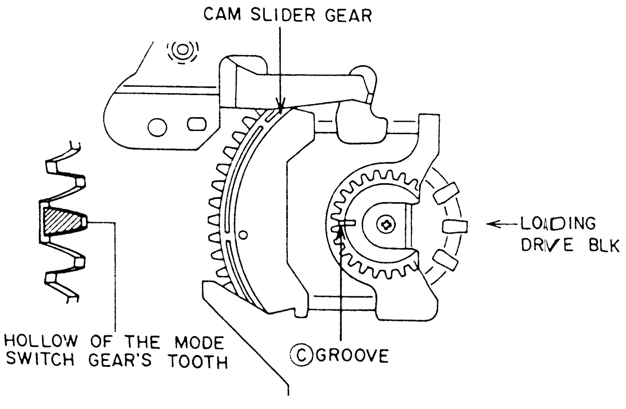

CAM SLIDER GEAR
LOADING DRIVE BLK
HOLLOW OF THE MODE SWITCH GEAR'S TOOTH
Ⓒ GROOVE

Fig. 3-15

3-4-5. Installation of the LOADING ARM BLK

1) While covering SENSOR (S) with your fingers, connect the AC power plug to the AC socket and then press the "EJECT" button on the OPERATION PCB. The FRONT LOADING SLIDER will reach the "EJECT" position. Then disconnect the AC power plug from the AC socket before you release your fingers from SENSOR (S).
2) Install the LOADING ARM BLK in the reverse order of 3-1-2 (Removal of the LOADING ARM BLK). Position the EJECT GEAR and the JOINT GEAR as shown in Fig. 3-16.

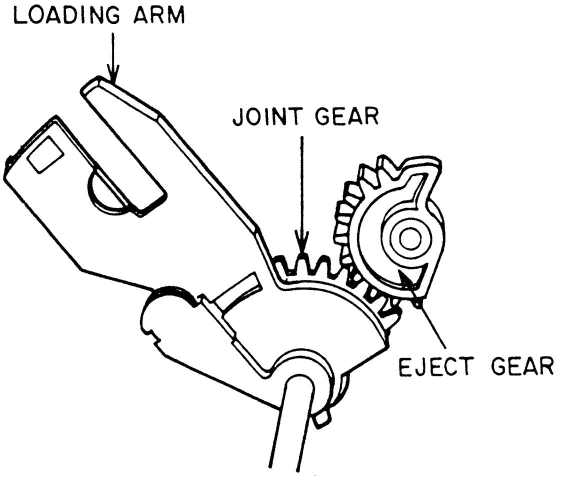

LOADING ARM
JOINT GEAR
EJECT GEAR

Fig. 3-16

3-4-6. Installation of the CASSETTE LOAD BLK, FRONT GUIDE and UPPER PLATE

1) Attach the CASSETTE LOAD BLK, FRONT GUIDE and UPPER PLATE in the reverse order of 3-1-1 (Removal of the CASSETTE LOAD BLK).
2) Insert a video cassette tape and confirm that the loading mechanism operates properly.

3-5. REPLACEMENT OF THE PINCH ROLLER PART

1) Remove the Ⓐ screw, then remove the PINCH ROLLER part, as shown in fig. 3-17
2) Set the pinch roller so that white plastic spacer side faces chassis when replacing. Then tighten the Ⓐ screw.

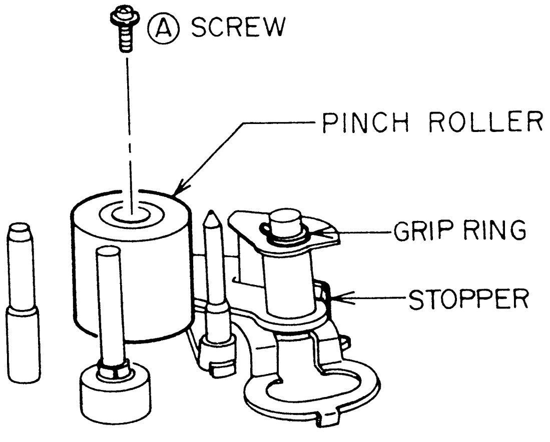

Ⓐ SCREW
PINCH ROLLER
GRIP RING
STOPPER

Fig. 3-17

3-6. REPLACEMENT OF THE IDLER PART (2) AND REVIEW BRAKE PART

1) Remove the CASSETTE LOAD BLOCK & LOADING ARM BLK. (refer to 3-1, REMOVAL OF THE EJECTOR BLOCK).
2) Release the stopper of the IDLER PART (2) as shown in Fig. 3-18, then remove it.

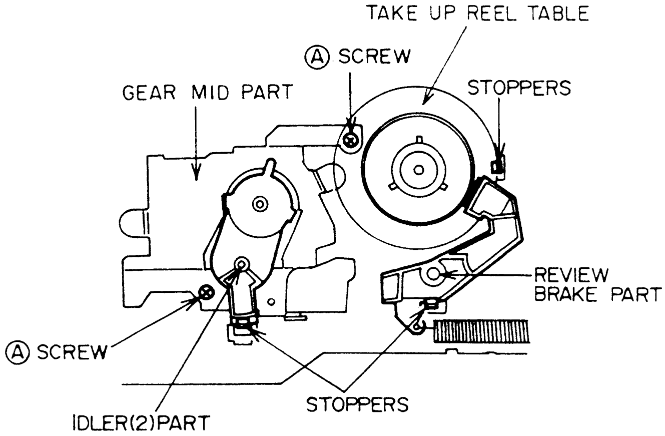

TAKE UP REEL TABLE
Ⓐ SCREW
GEAR MID PART
STOPPERS
REVIEW BRAKE PART
Ⓐ SCREW
STOPPERS
IDLER(2)PART

Fig. 3-18

3) Take off the review brake part spring, then release the stopper of the REVIEW BRAKE PART and remove it.
4) Reassemble these parts in the reverse order of steps 1) to 3).

3-7. REPLACEMENT OF THE GEAR MID PART

1) Remove the REVIEW BRAKE PART and IDLER (2) PART as shown in Fig. 3-19.
2) Release the stopper of the TAKE UP REEL TEBLE then remove it.
3) Remove the two Ⓐ screws then replace the GEAR MID PART.
4) Reassemble in the reverse order.

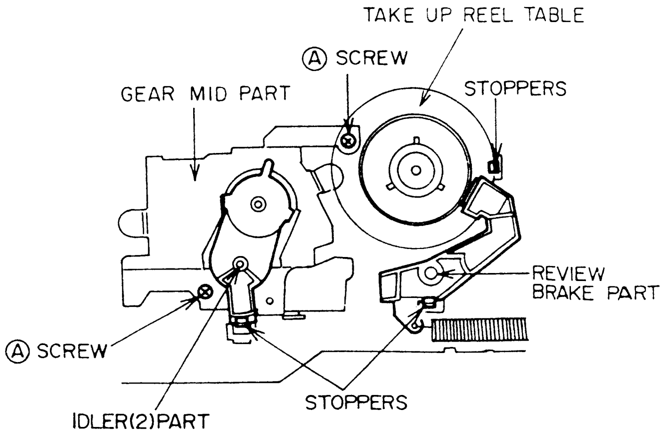

TAKE UP REEL TABLE
Ⓐ SCREW
GEAR MID PART
STOPPERS
REVIEW BRAKE PART
Ⓐ SCREW
STOPPERS
IDLER(2)PART

Fig. 3-19

3-8. REPLACEMENT OF THE UPPER DRUM

3-8-1. Removal of the UPPER DRUM

1) Remove one of the PRE AMP retaining screw and remove the EARTH BRUSH.
2) Unsolder the eight relay leads and remove the two upper drum fixing screws as shown in Fig. 3-20.
3) Gently lift and remove the UPPER DRUM.

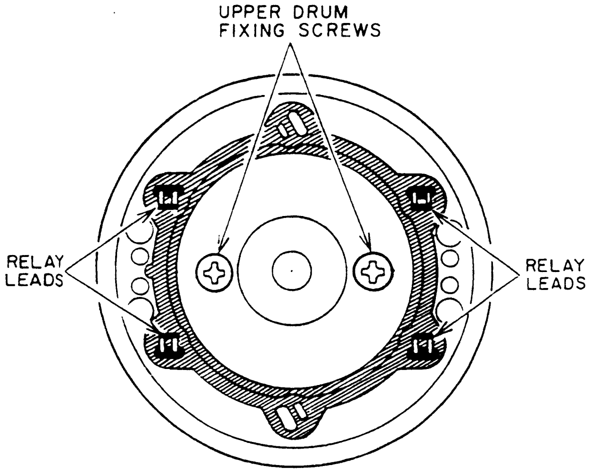


Fig. 3-20

3-8-2. Installation of the UPPER DRUM

1) Attach the UPPER DRUM to the LOWER DRUM ROTOR, so that the upper drum convex Ⓐ and lower drum rotor's green PCB side line up, as shown in Fig. 3-21.

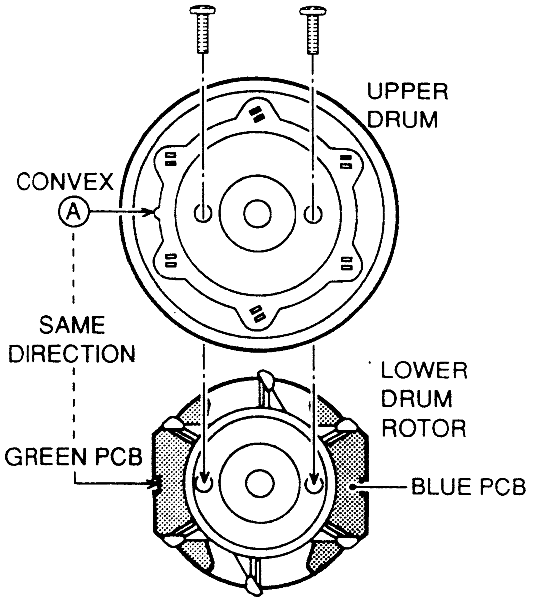


Fig. 3-21

NOTE: Because height precision is required for proper performance, and because head tips are fragile, the following points should be noted when replacing the UPPER DRUM BLOCK.

(a) Do not loosen the set screw on the collar preload.
(b) Before fixing, use alcohol to clean both surfaces where the upper drum and the rotary transformer meet.
(c) If the UPPER DRUM can not be inserted on to the shaft easily during installation, clean the hole in the UPPER DRUM with alcohol and put a little oil on the shaft.
(d) Make sure that the upper drum fixing screw holes, on the rotary transformer part, and the upper drum fixing screw penetration holes match exactly before inserting the fixing screws.
(e) Tighten the two upper drum fixing screws alternately and gradually.

3-8-3. After replacement

After replacement, the following adjustments are necessary for the proper performance.

1) Control head Phase adjustment (IV. MECHANICAL ADJUSTMENT 4-3-3.)
2) PB switching point adjustment. (V. ELECTRICAL ADJUSTMENT Step 1)
3) Video head REC current adjustment. (V. ELECTRICAL ADJUSTMENT Step 6)
4) ENV. DET (I-HQ) adjustment. (V. ELECTRICAL ADJUSTMENT Step 8)

3-9. DRUM MOTOR PC BOARD REPLACEMENT

1) Remove the two Ⓐ screws on the ROTARY PLATE and then remove it.
   Then disconnect the connector on the DRUM MOTOR PCB as shown.

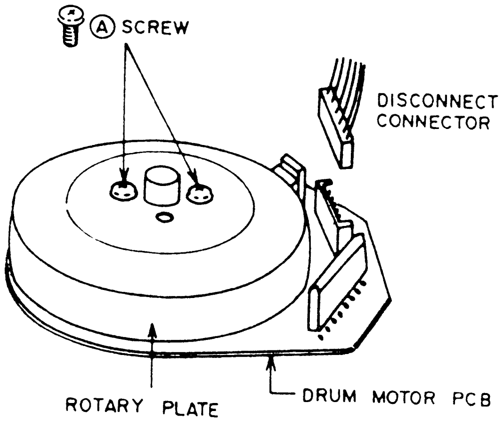


Fig. 3-22

2) Remove the three Ⓑ screws which retain the DRUM MOTOR PCB and replace it.

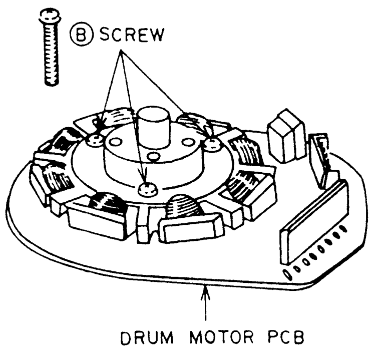


Fig. 3-23

3) Attach the ROTARY PLATE to the collar preload so that the rotary plate Ⓒ hole and collar preload Ⓓ hole line up

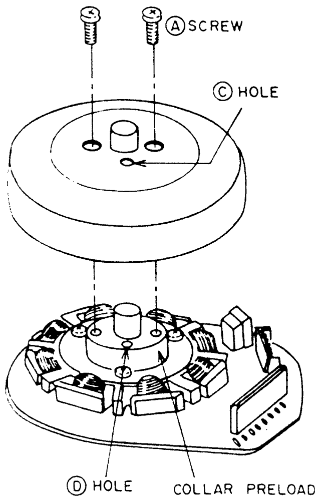


Fig. 3-24

4) After replacement, PB switching point adjustment (V. ELECTRICAL ADJUSTMENT Step 1) is necessary for the proper performance.

3-10. REMOVAL OF THE PRE AMP PCB

1) Remove the TRANS COVER if attached (refer to step 1-4).
2) Remove the Ⓐ screw and remove the EARTH BRUSH as shown in Fig. 3-25.

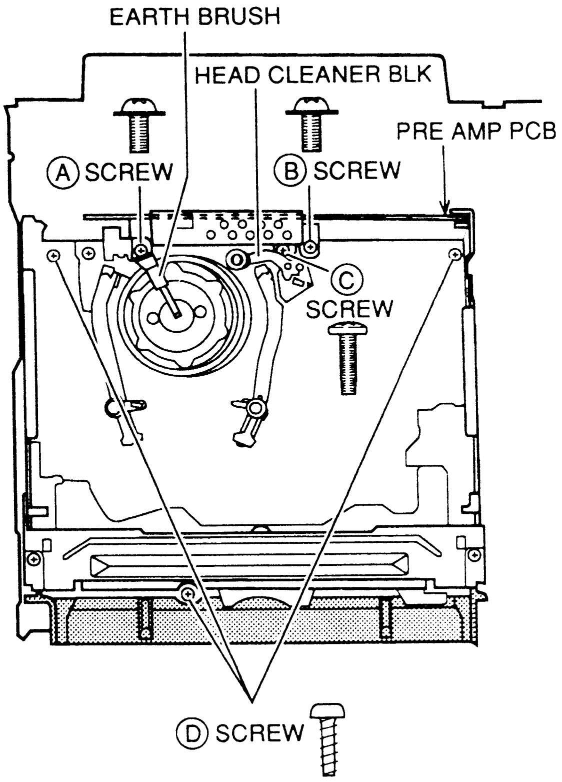


Fig. 3-25

3) Remove the Ⓑ screw and remove the DIODE PCB (if attached) then pull up the PRE AMP PCB carafully.
4) Reassemble in the reverse order for installation. When positioning the PRE AMP PCB, carefully align the P1 connector on the PRE AMP PCB to the VIDEO HEAD's FPC cable not to damage the FPC cable.

3-11. REPLACEMENT OF THE HEAD CLEANER BLOCK

1) Remove the PRE AMP PCB (refer to step 3-10).
2) Remove the Ⓒ screw on the HEAD CLEANER BLOCK.
3) Reassemble in the reverse order for installtion.

3-12. REMOVAL OF THE MECHANISM BLOCK (MECHA. FRAME)

1) Remove the PRE AMP PCB (refer to step 3-10).
2) Disconnect the connectors P301, P302, P303 on the MAIN (A) PCB and P1 on the A/C HEAD PCB.
3) Disconnect the connector on the FULL TRACK ERASE HEAD and P4 on the OPERATION (E) PCB.
4) Remove the three Ⓓ screws from the MECHA. FRAME as shown in Fig. 3-25.
5) Hold the rear side of the MECHA. FRAME then remove it by pulling it up backwards.
6) Reassemble in the reverse order for installation.

IV. MECHANICAL ADJUSTMENT

4-1. BACK TENSION ADJUSTMENT

1) Prepare a video cassette tape which you no longer needed. Remove both tape reels and the tape protection cover from the cassette tape. Then cover the video cassette's left and right side detection holes with black adhesive tape.
2) Play back the tapeless cassette which you prepared.
3) Confirm the distance between Ⓐ groove on the TENSION ARM and the Ⓐ mark on the MECHA. CHASSIS so that the distance should be within the value shown in Fig. 4-1
4) If the result is not satisfactory, eject the tape and adjust the TENSION ADJUST repeatedly until the result is satisfactory.

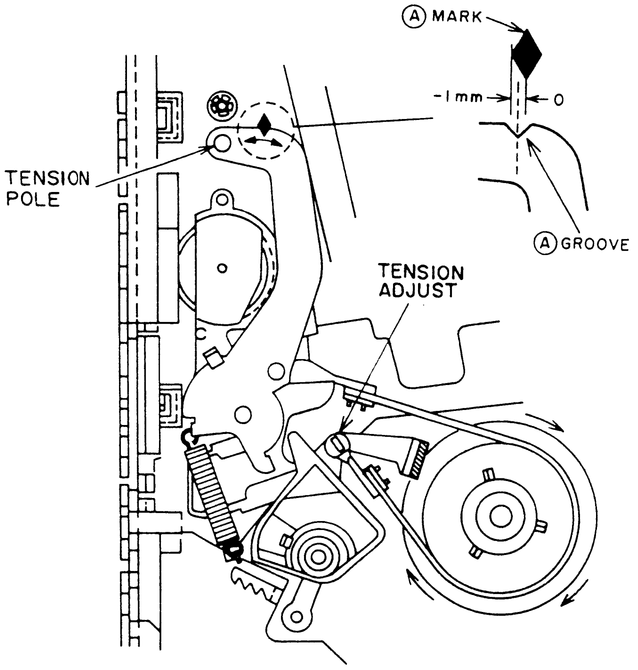


Fig. 4-1

4-2. TAPE TRANSPORT ADJUSTMENTS

NOTE: The following adjustments are required only when an irregularity is found, since these adjustment are precisely set at the factory.

4-2-1. Tape curl adjustment at the TAKE-UP TAPE GUIDE

1) Play back a recorded tape which is no longer needed.
2) Turn the Ⓐ screw on the A/C HEAD BLK, until the edge of the tape barely touches the lower part of the TAKE UP TAPE GUIDE, without any curl or wrinkle.
3) Once the Ⓐ screw is adjusted, A/C HEAD height and azimuth adjustment is required. (Refer to 4-3. A/C HEAD POSITION ADJUSTMENT.)

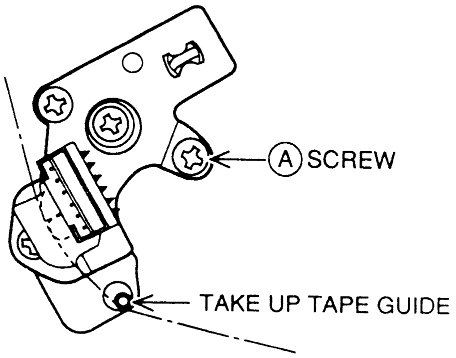


Fig. 4-2

(TAKE-UP TAPE GUIDE)

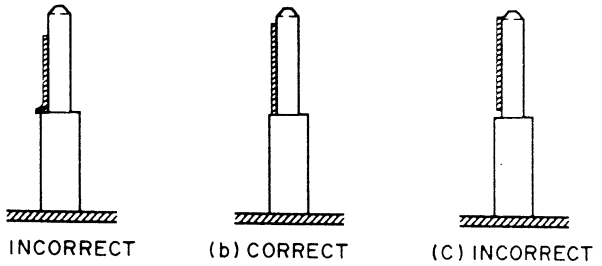


Fig. 4-3

4-2-2. Confirmation of tape curl on the SUPPLY TAPE GUIDE

Confirm that the edge of the tape barely touches the lower part of the SUPPLY TAPE GUIDE, without any curl or wrinkle as shown in Fig. 4-4.

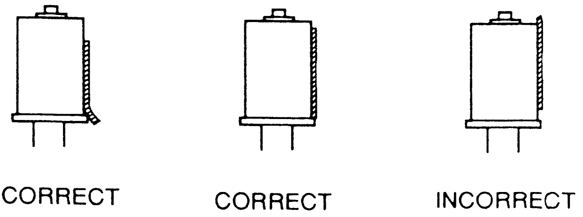


Fig. 4-4

4-2-3. REVIEW ARM height adjustment

1) Play back the beginning part of an E-240 tape and set the unit to the REVIEW mode by pressing the REW button. (Remove the tape protection cover to make the adjustment easier.)

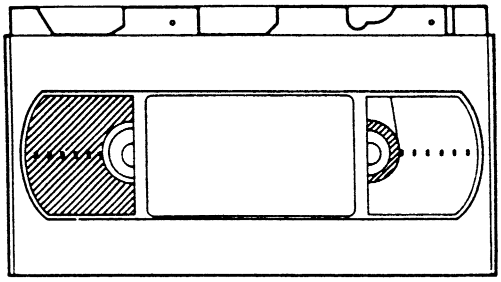


Fig. 4-5

2) Turn the REVIEW ARM height Ⓐ nut so that the edge of the tape barely touches the lower part of the TAKE-UP TAPE GUIDE, without any curl or wrinkle between the TAKE-UP TAPE GUIDE and the CAPSTAN SHAFT as shown in Fig. 4-6 to Fig. 4-8.

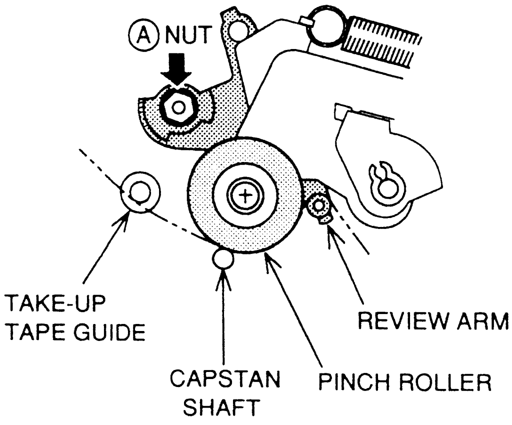
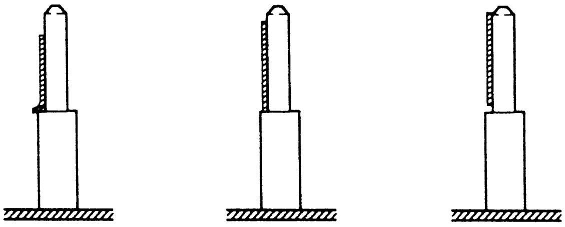


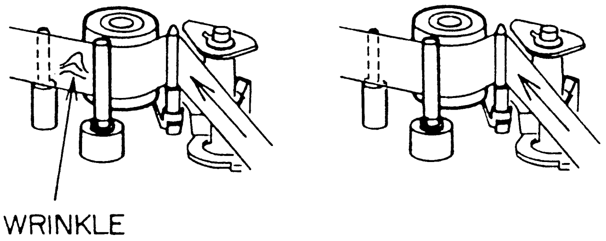
Fig. 4-6

(TAKE-UP TAPE GUIDE)



(a) INCORRECT (b) CORRECT (c) INCORRECT

Fig. 4-7



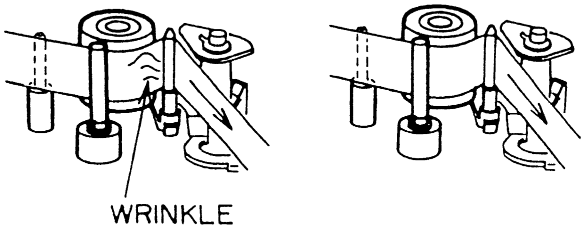
INCORRECT CORRECT

Fig. 4-8

3) Play back the beginning part of an E-240 tape and this time set the unit to the CUE mode by pressing the F. FWD button.

4) Confirm there is no curl or wrinkle near the REVIEW ARM's guide.

If curl or wrinkle of the tape occurs, slightly turn the Ⓐ nut (Shown in Fig. 4-6) until it disappears.

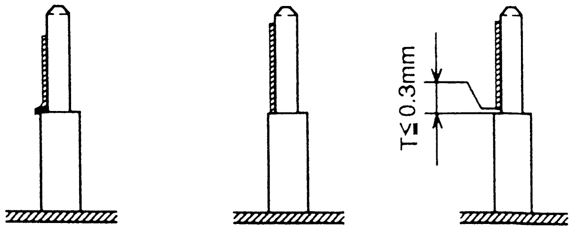


INCORRECT CORRECT

Fig. 4-9

5) Set the unit to the REVIEW mode again. Then confirm that there is no curl or wrinkle near the TAKE-UP TAPE GUIDE. (A small gap may appear after this adjustment, but this is allowable.)

(TAKE UP TAPE GUIDE)



(a) INCORRECT (b) CORRECT (c) CORRECT

Fig. 4-10

NOTE:

1. If the results are not satisfactory, repeat steps 2) to 5).
2. Always play an undamaged tape to obtain satisfactory adjustment.
3. Because an E-240 tape can be damaged easily, due of its thinness, a pre-adjustment with an E-180 tape is recommended.

4-2-3. REVIEW ARM height adjustment

1) Play back the beginning part of an E-240 tape and set the unit to the REVIEW mode by pressing the REW button. (Remove the tape protection cover to make the adjustment easier.)

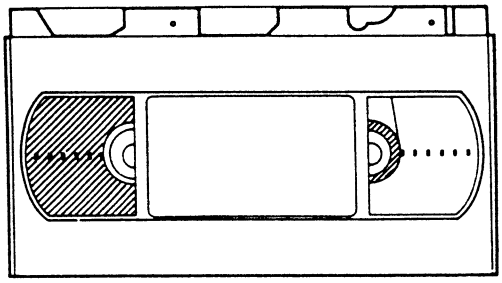


Fig. 4-5

2) Turn the REVIEW ARM height Ⓐ nut so that the edge of the tape barely touches the lower part of the TAKE-UP TAPE GUIDE, without any curl or wrinkle between the TAKE-UP TAPE GUIDE and the CAPSTAN SHAFT as shown in Fig. 4-6 to Fig. 4-8.

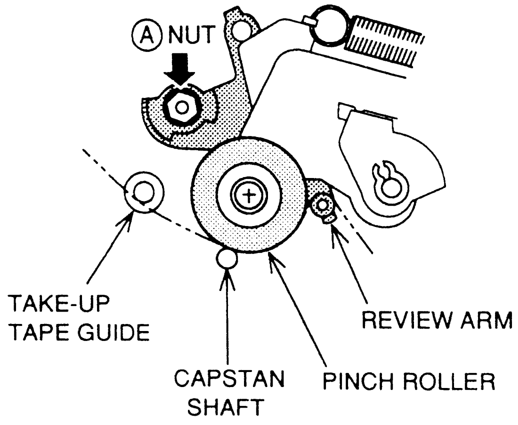
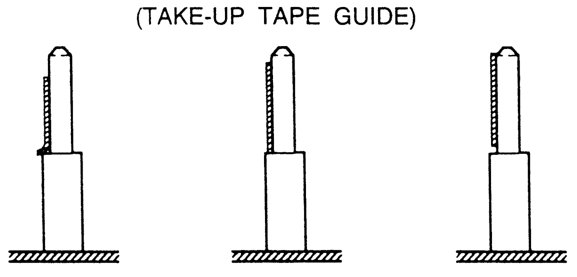
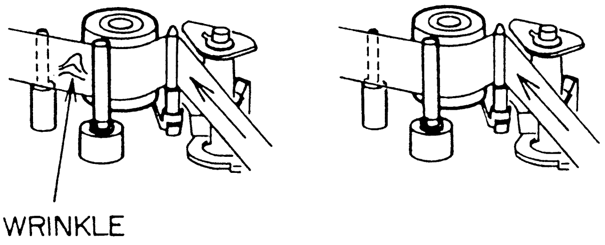


Fig. 4-6



(a) INCORRECT (b) CORRECT (c) INCORRECT

Fig. 4-7

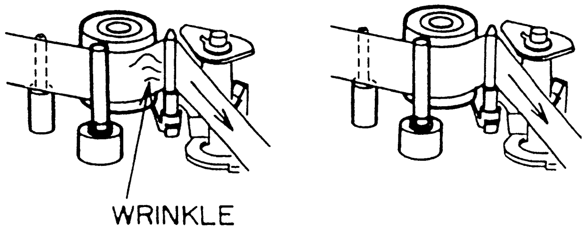


INCORRECT CORRECT

Fig. 4-8

3) Play back the beginning part of an E-240 tape and this time set the unit to the CUE mode by pressing the F. FWD button.

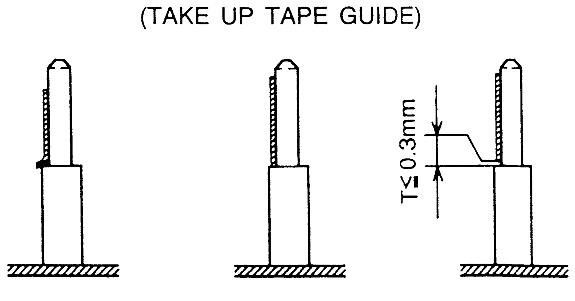
4) Confirm there is no curl or wrinkle near the REVIEW ARM's guide.
If curl or wrinkle of the tape occurs, slightly turn the Ⓐ nut (Shown in Fig. 4-6) until it disappears.



INCORRECT CORRECT

Fig. 4-9

5) Set the unit to the REVIEW mode again. Then confirm that there is no curl or wrinkle near the TAKE-UP TAPE GUIDE. (A small gap may appear after this adjustment, but this is allowable.)



(a) INCORRECT (b) CORRECT (c) CORRECT

Fig. 4-10

NOTE:

1. If the results are not satisfactory, repeat steps 2) to 5).
2. Always play an undamaged tape to obtain satisfactory adjustment.
3. Because an E-240 tape can be damaged easily, due of its thinness, a pre-adjustment with an E-180 tape is recommended.

4-2-3. REVIEW ARM height adjustment

1) Play back the beginning part of an E-240 tape and set the unit to the REVIEW mode by pressing the REW button. (Remove the tape protection cover to make the adjustment easier.)

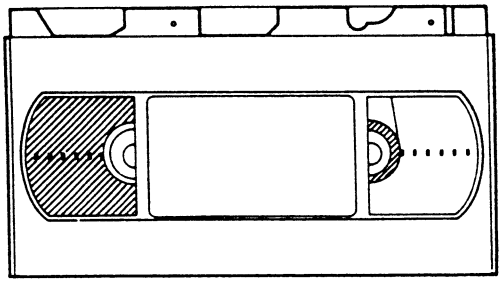


Fig. 4-5

2) Turn the REVIEW ARM height Ⓐ nut so that the edge of the tape barely touches the lower part of the TAKE-UP TAPE GUIDE, without any curl or wrinkle between the TAKE-UP TAPE GUIDE and the CAPSTAN SHAFT as shown in Fig. 4-6 to Fig. 4-8.

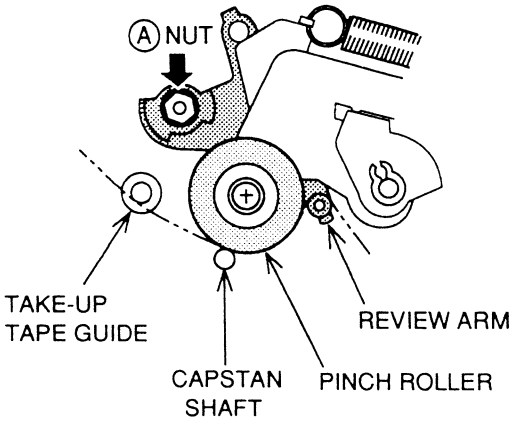
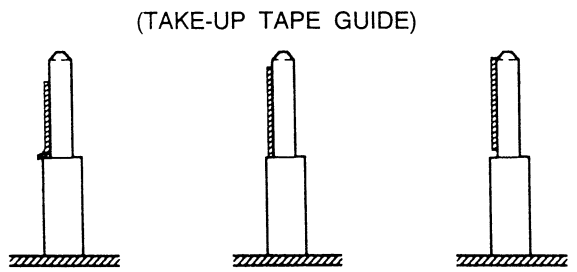
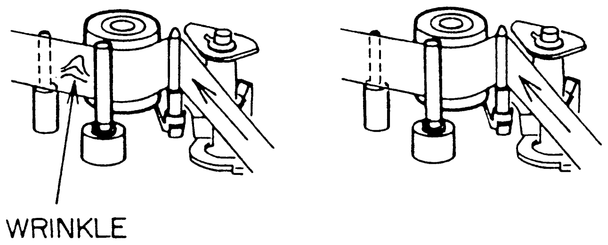


Fig. 4-6



(a) INCORRECT (b) CORRECT (c) INCORRECT

Fig. 4-7

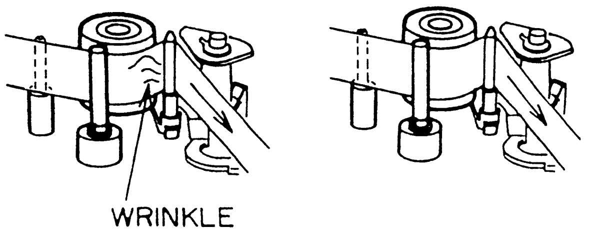


INCORRECT CORRECT

Fig. 4-8

3) Play back the beginning part of an E-240 tape and this time set the unit to the CUE mode by pressing the F. FWD button.

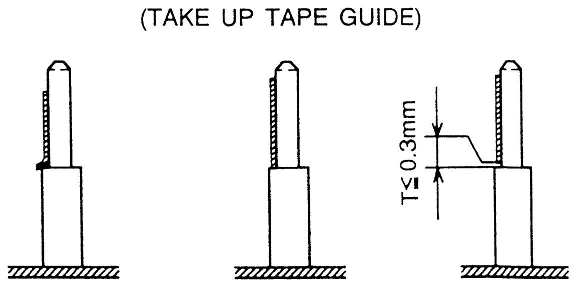
4) Confirm there is no curl or wrinkle near the REVIEW ARM's guide.
If curl or wrinkle of the tape occurs, slightly turn the Ⓐ nut (Shown in Fig. 4-6) until it disappears.



INCORRECT CORRECT

Fig. 4-9

5) Set the unit to the REVIEW mode again. Then confirm that there is no curl or wrinkle near the TAKE-UP TAPE GUIDE. (A small gap may appear after this adjustment, but this is allowable.)



(a) INCORRECT (b) CORRECT (c) CORRECT

Fig. 4-10

NOTE:
1. If the results are not satisfactory, repeat steps 2) to 5).
2. Always play an undamaged tape to obtain satisfactory adjustment.
3. Because an E-240 tape can be damaged easily, due of its thinness, a pre-adjustment with an E-180 tape is recommended.

4-2-3. REVIEW ARM height adjustment

1) Play back the beginning part of an E-240 tape and set the unit to the REVIEW mode by pressing the REW button. (Remove the tape protection cover to make the adjustment easier.)

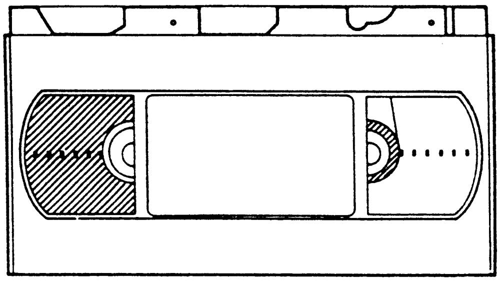


Fig. 4-5

2) Turn the REVIEW ARM height Ⓐ nut so that the edge of the tape barely touches the lower part of the TAKE-UP TAPE GUIDE, without any curl or wrinkle between the TAKE-UP TAPE GUIDE and the CAPSTAN SHAFT as shown in Fig. 4-6 to Fig. 4-8.

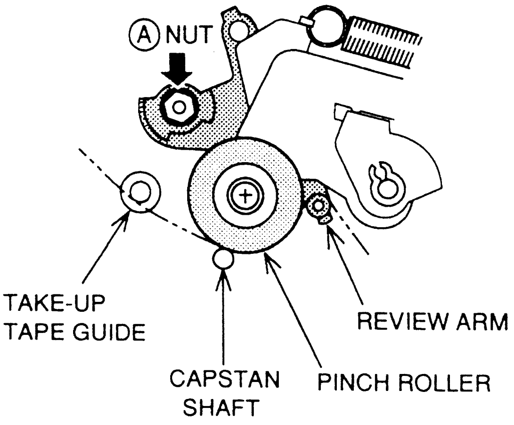
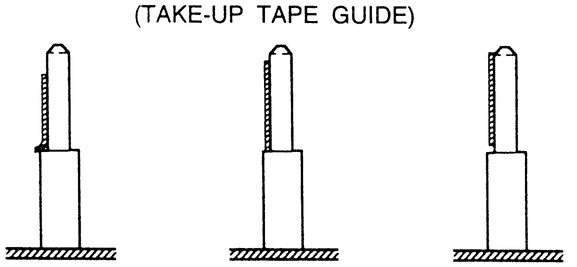
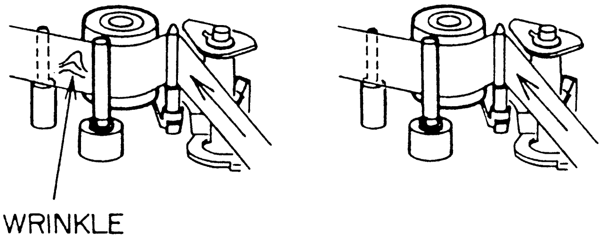


Fig. 4-6



(a) INCORRECT (b) CORRECT (c) INCORRECT

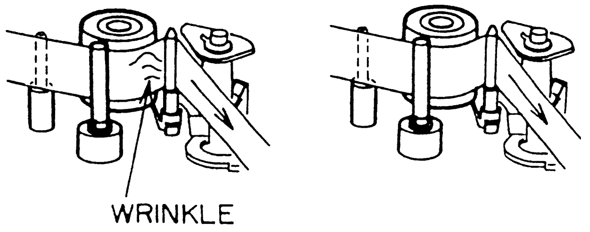
Fig. 4-7



INCORRECT CORRECT

Fig. 4-8

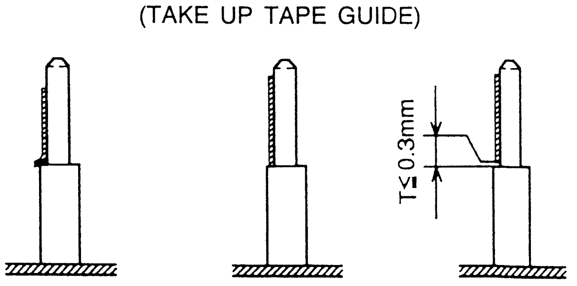
3) Play back the beginning part of an E-240 tape and this time set the unit to the CUE mode by pressing the F. FWD button.
4) Confirm there is no curl or wrinkle near the REVIEW ARM's guide.
If curl or wrinkle of the tape occurs, slightly turn the Ⓐ nut (Shown in Fig. 4-6) until it disappears.



INCORRECT CORRECT

Fig. 4-9

5) Set the unit to the REVIEW mode again. Then confirm that there is no curl or wrinkle near the TAKE-UP TAPE GUIDE. (A small gap may appear after this adjustment, but this is allowable.)



(a) INCORRECT (b) CORRECT (c) CORRECT

Fig. 4-10

NOTE:
1. If the results are not satisfactory, repeat steps 2) to 5).
2. Always play an undamaged tape to obtain satisfactory adjustment.
3. Because an E-240 tape can be damaged easily, due of its thinness, a pre-adjustment with an E-180 tape is recommended.

4-2-4. LOADING LEADER height adjustments

1) Slightly loosen the set screw at the lower part of the LOADING LEADERs (L), (R) so that the LOADING LEADER can be adjusted with reasonable tightness. (Refer to Fig. 4-11.)

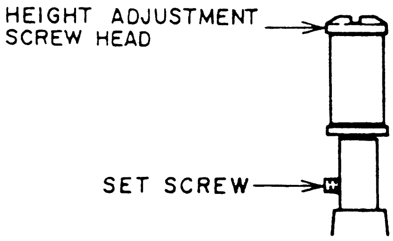


Fig. 4-11

2) Play back reference tape TF-530RFS (AT-751775).
3) Connect an oscilloscope's CH-1 to TR510 emitter (ENVE) on the MAIN (A) PCB and CH-2 to TP2 (V-SWP) on the PRE AMP PCB for triggering.
4) Turn the LOADING LEADER heads with a flat head (—) screwdriver to obtain a flat RF envelope as the ideal envelope, as shown in Fig. 4-12.
5) After adjustment is completed, tighten the loading leader set screws.

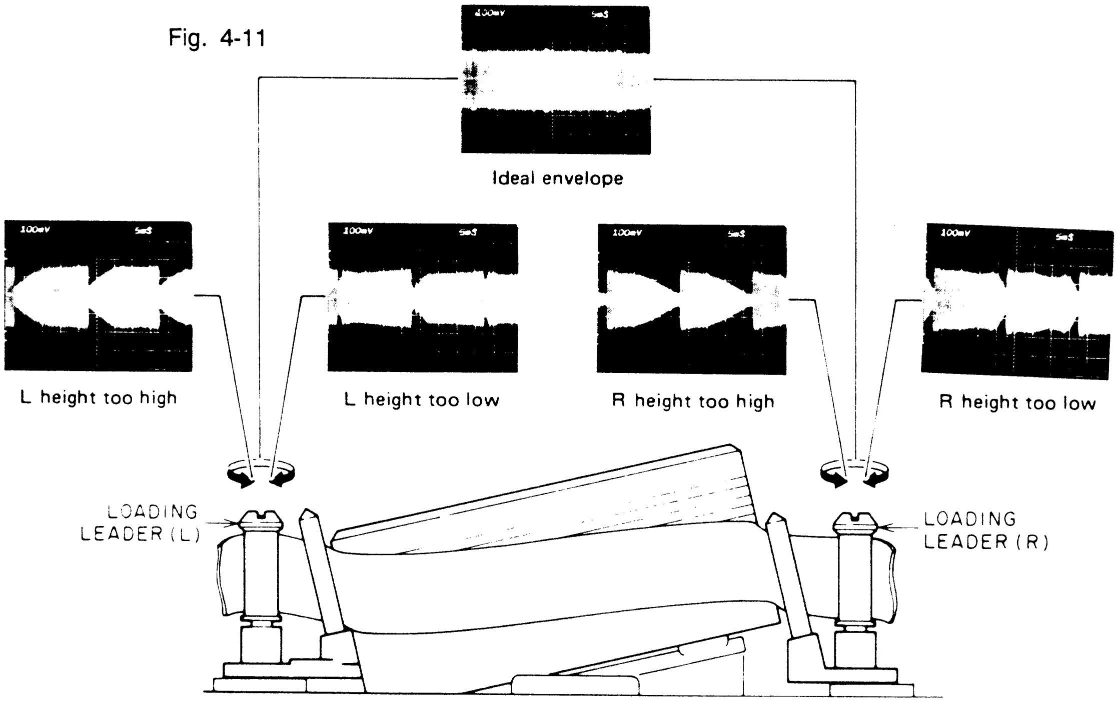


Fig. 4-12

4-3. A/C HEAD POSITION ADJUSTMENT

4-3-1. Azimuth adjustment

1) Connect an AC voltmeter or an oscilloscope to the AUDIO OUT terminal on the rear panel.
2) Play back the reference tape TF-530RFS (AT-751775).
3) Adjust the Ⓑ screw to obtain the maximum audio output.

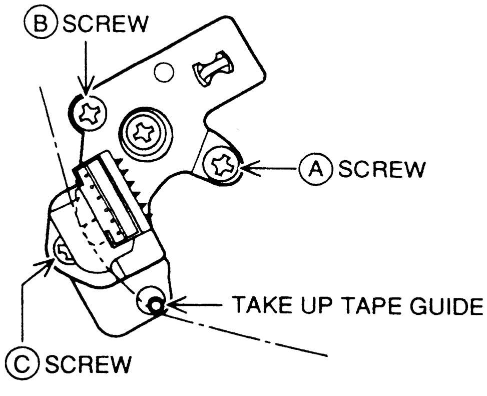
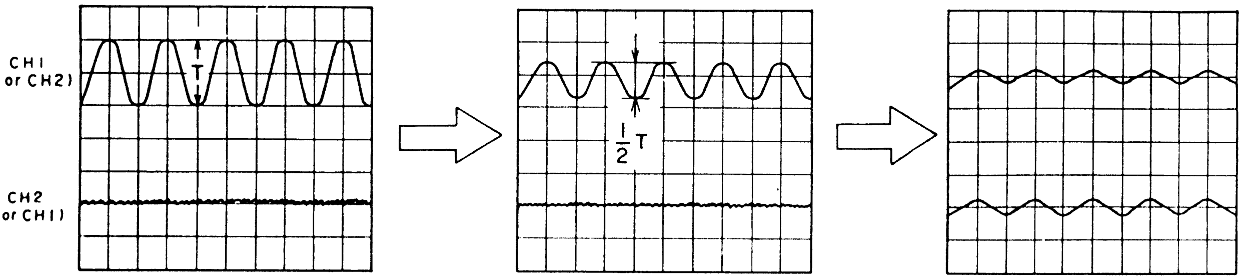


Fig. 4-13

4-3-2. Height adjustment

1) Play back test tape TF-526HH (AT-751788).
2) Connect an oscilloscope's CH-1 to the AUDIO OUT terminal on the rear panel and CH-2 to TP301 (CTL OUT) on the MAIN (A) PCB.
3) Turn the Ⓒ screw to obtain 1/2 of the output level of either CH-1 or CH-2, whichever has an output signal as shown in Fig. 4-14.
   Then set both of the oscilloscope's channels to 100 mV/div and finely adjust the Ⓒ screw until both signals of CH-1 and CH-2 are nearly the same level.
4) Slightly turn the Ⓐ screw until the tape edge barely touches the lower part of the TAKE-UP TAPE GUIDE without any curl or wrinkle as shown in Fig. 4-3.
5) Adjust the head azimuth again. (Turning the Ⓒ screw, or Ⓐ screw, will cause head azimuth mis-alignment. Refer to 4-3-1. Azimuth adjustment.)
6) Confirm that both signals of CH-1 and CH-2 are nearly the same level (confirm that neither of the CH-1 or CH-2 output levels exceed 100 mVp-p). If the result is not satisfactory, repeat steps 3) to 5).



(a) CH1 = T

(b) CH1 = $\frac{1}{2}$T

(c) CH1 = CH2

Fig. 4-14

4-3-3. Phase adjustment

1) Connect an oscilloscope's CH-1 to the TR510 emitter (ENVE) on the MAIN (A) PCB and CH-2 to TP2 (V-SWP) on the PRE AMP PCB for triggering.
2) Play back reference tape TF-530RFS (AT-751775).
3) Press the ">" or "<" cursor button on the remote control until the "X" mark can be seen in the center position of the tracking range on the TV screen as shown in Fig. 4-15.

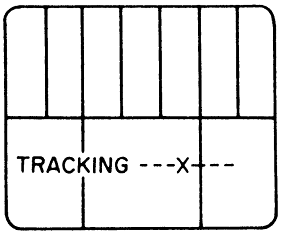


Fig.4-15

4) Loosen the Ⓓ screw slightly so that the A/C HEAD PLATE can be moved with reasonable tightness.

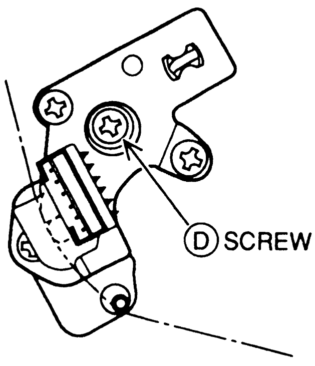


Fig.4-16

5) Insert a philips type screwdriver into the Ⓐ hole through the A/C HEAD BASE as shown in Fig. 4-17.

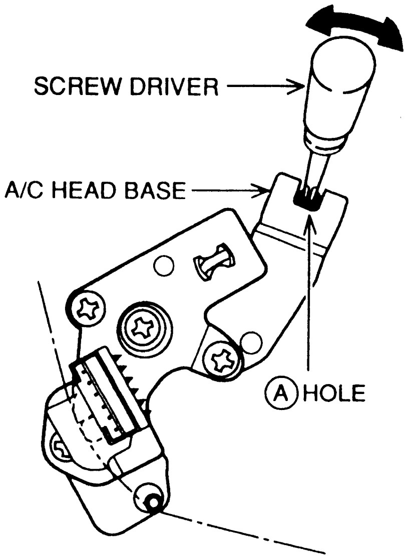


Fig. 4-17

6) Move the A/C HEAD BASE by moving a screwdriver in the direction of the arrow as shown in Fig. 4-17 to obtain the maximum RF output, then tighten the Ⓓ screw.
7) Eject the tape and then re-insert it and play it back again. Confirm that the RF output is maximum after the auto tracking control has been activiated. Next, press the ">" or "<" cursor button on the remote control unit alternately and confirm that the RF output is maximum at the tracking center position. If the result is not satisfactory, repeat the adjustment, step 2) to 6). (This adjustment is very important as this affects to the interchangeability of the recorded tapes.)

V. ELECTRICAL ADJUSTMENT

Precautionary items prior to adjustments
1. The colour bar generator output should be 1.0 Vp-p.
2. The video output terminal should be terminated with 75 ohms (connect dummy load or 75 ohms input TV).
3. Make sure that the A/C head phase adjustment has been adjusted correctly before making PB SWITCHING POINT ADJUSTMENT (refer to step 4-3-3).

The following test tapes are required.

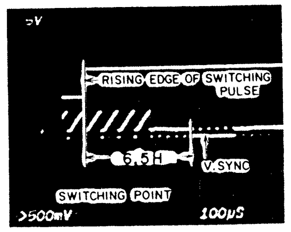
Test tape	Parts No.
TF-527BL	AT-711880
TF-530RFS	AT-751775
TF-532CBS	AT-751360
TF-556AT	AT-751822J

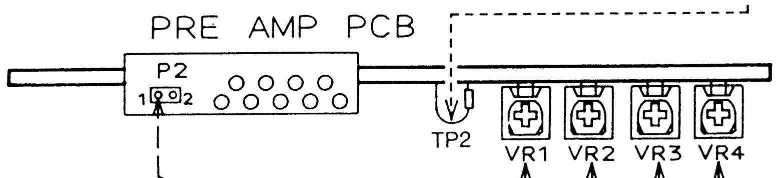
STEP ADJUSTMENT ITEM
1. MODE and INPUT SIGNAL/TEST TAPE → ADJ. part
2. TEST POINT and ADJ part
3. REMARKS (•) & RESULT (*) → Test point

1 PB SWITCHING POINT

1. "PB", test tape TF-530RFS
2. TP2 (SWP), VIDEO OUT & VR301 (SW.POINT)
3. • Connect an oscilloscope's CH-1 to TP2 (SWP) for triggering and CH-2 to VIDEO OUT.
   - Play back the test tape and set the tracking to the center position with the remote control unit.

   * Adjust VR301 so that the switching point is positioned 6.5 H from the V-SYNC left edge as shown.



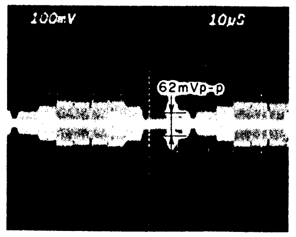


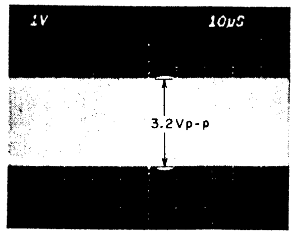
6 VIDEO REC CURRENT

1. "REC" (LP mode), PAL colour bar signal
2. P2 (REC.CURR) ① pin & VR1 (REC-CHROMA), VR2 (REC-Y)
3. • Connect an oscilloscope's CH-1 to P2 (REC.CURR) ① pin and CH-2 to VIDEO OUT for triggering.
   - Connect the TP401 to the JW25 (IDL 5 V) with a jumper wire.

   * Adjust VR1 (REC-CHROMA) so that the chroma REC current becomes 62 mVp-p at the burst signal area. (Measure the center value of the noise part of the burst signal.)

   * Disconnect the jumper wire and colour bar input signal, then adjust VR2 (REC-Y) so that the Y REC current becomes 3.2 Vp-p.

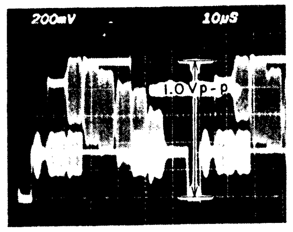


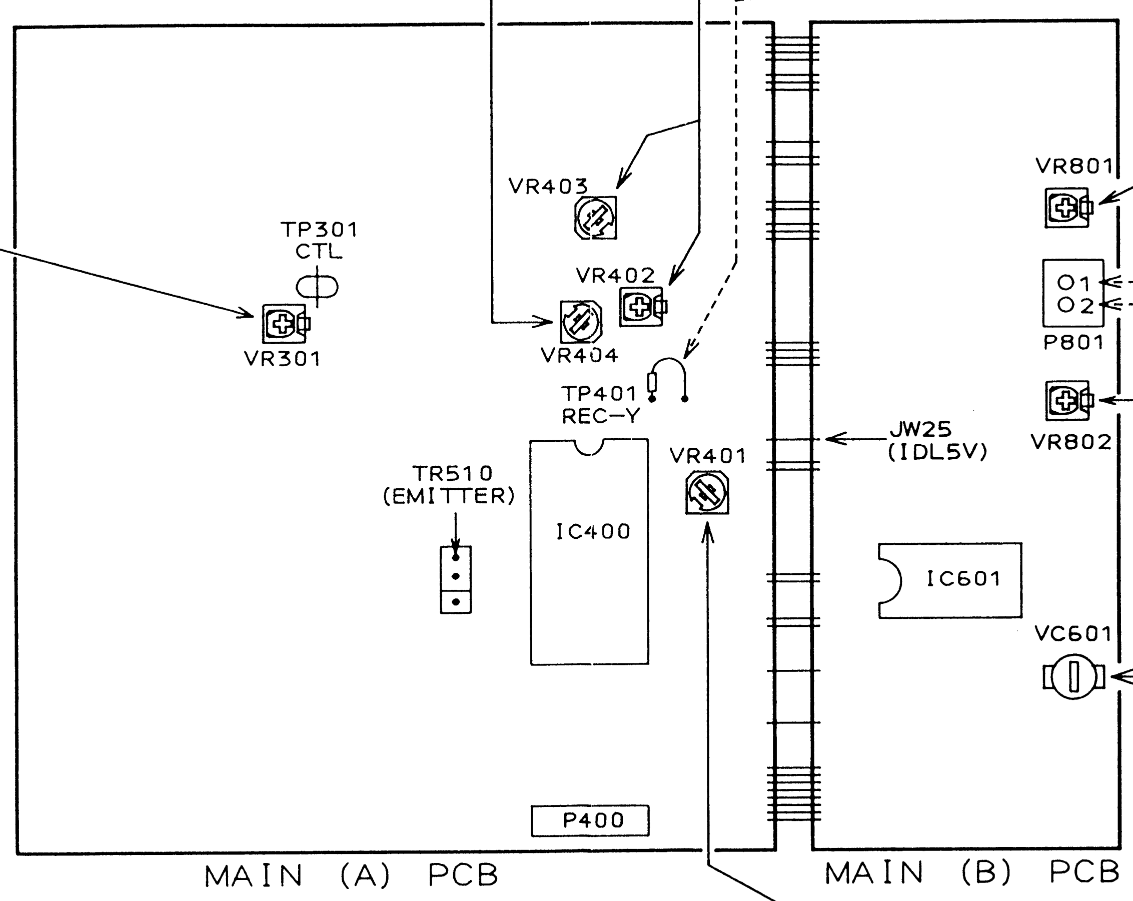


7 VIDEO PB LEVEL

1. "REC" → "PB", PAL colour bar signal
2. VIDEO OUT & VR404 (PB LEVEL)
3. • Connect an oscilloscope to VIDEO OUT
   - Make a recording on the tape, then play it back

   * Adjust VR404 so that the PB level becomes 1.0 Vp-p





8 ENVELOPE DETECT (I-HQ)

(This adjustment should be performed in the "TEST" mode.)
To set the VCR to the "TEST MODE", press and hold both the "POWER" and "EJECT" buttons on the front panel, then plug in the AC power cord.
The TEST MODE can be cancelled by disconnecting the AC power cord or simply by pressing the RESET button on the front panel.

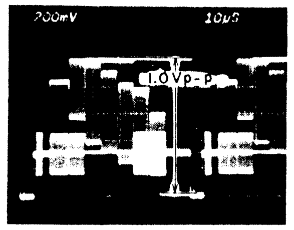
1. "REC" → "PB", PAL colour bar signal
2. FL display & VR3 (SP mode), VR4 (LP mode)
3. • Record the PAL colour bar signal on the test tape TF-556AT and then play it back.
   - Observe the number which is displayed on the minute part of the FL display.

   * Adjust the VR3 and VR4 respectively so that the number displayed on the FL display becomes "90" in both the "SP mode" and "LP mode".

4 VIDEO E-E LEVEL

1. "E-E" (STOP mode), PAL colour bar signal
2. VIDEO OUT & VR401 (E-E LEVEL)
3. • Connect an oscilloscope to VIDEO OUT.

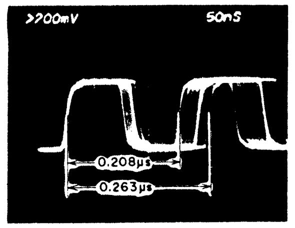
   * 1.0 Vp-p



5 CARRIER SET & DEVIATION

1. "REC", PAL colour bar signal
2. TP401 (REC.Y) & VR402 (CARRIER), VR403 (DEVIATION)
3. • Connect an oscilloscope to TP401 (REC.Y)

   * VR402 (CARRIER) : 0.263 μs (3.8 MHz)
   * VR403 (DEVIATION): 0.208 μs (4.8 MHz)



2 AUDIO PB LEVEL

1. "PB", test tape TF-527BL
2. AUDIO OUT & VR801
3. • Connect AC voltmeter to AUDIO OUT

   * -5 dBs

3 AUDIO REC BIAS

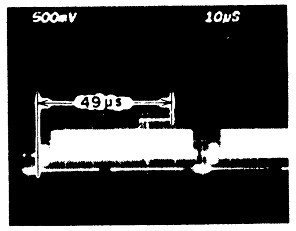
1. "REC", No signal input
2. P801 ① pin, ② pin & VR802
3. • Connect an AC voltmeter to P801 ① pin (GND side) and ② pin.
   (Never connect the AC voltmeter's GND to the VCR's ground.)

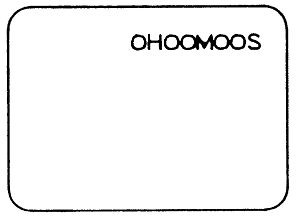
   * Adjust VR802 so that the reading on the AC voltmeter becomes 2.5 mV

9 CHARACTER POSITION

1. "E-E" (STOP mode), No signal input
2. VIDEO OUT, TV screen & VC601 (IMS)
3. • Press the "DISPLAY" button once on the remote control unit to display the elapsed tape counter.

   * Adjust VC601 (IMS) so that the right end of the IMS signal becomes 49 μs from the H-sync as shown





ON THE TV SCREEN

VI. PARTS LIST

ATTENTION

1. **When placing an order for parts, be sure to list the Part No., Model No. and the description of each part. Otherwise, the non-delivery of the part or the delivery of a wrong part may result.**
2. **Please make sure that Part No. is correct when ordering. If not, a part different from the one you ordered may be delivered.**
3. **Since the parts shown in Parts List of Preliminary Service Manual may have been the subject of changes, please use this Parts List for all future reference.**

HOW TO USE THIS PARTS LIST

1. This Parts List lists those parts which are considered necessary for repairs. Other common parts, such as resistors and capacitors, are listed in the "Common List for Service Parts" from which these parts should be selected and stocked.
2. The Recommended Spare Parts List shows those parts in the Parts List which are considered particularly important for service.
3. Parts not shown in the Parts List and "Common List for Service Parts" will not in principle be supplied.
4. How to read the Parts List.

a) Mechanism Block

2. HEAD BASE BLOCK

Ref. No.	Part No.	Description
1	BH-T2023A320A	HEAD BASE BLOCK
2	HP-H2206A010A	HEAD R/P PR4-8FU C
3	ZS-477876	PAN20×03STL CMT
4	ZS-536488	BID20×08STL CMT
5	ZG-402895	SP CS ANGLE ADJUST

SP (Service Parts) Classification

This number corresponds with the individual parts index number in that figure.

b) PC Board

6. MAIN PC BOARD

Ref. No.	Part No.	Description
IC1	EI-324536	IC HD14049BP
IC2	EI-336801	IC MB8841-564M
C1A	EC-338399	C MMY V 223M 250AC [U.E,B,S]
C1B	EC-350949	C MMY V 223M 250DC [J]
C1C	EC-338397	C MMY V 223M 125AC [C,A]
X1	EI-318384	OSC X'TAL NC-18C

Symbols for primary destination

[A] :AAL (U.S.A)
[S] :SAA (Australia)
[B] :BEAB (England)
[U] :U/T (Universal Area)
[C] :CSA (Canada)
[E] :CEE (Europe)
[V] :VDE (Germany)
[J] :JPN (Japan)
[Y] :Custom Version

SP (Service Parts) Classification

These reference symbols correspond with component symbols in the Schematic Diagrams.

The available PC Board Blocks are listed separately.

5. When Part No. is known, Parts Index at end of Parts List can be used to locate where that part is shown in Parts List by its Reference No. listed at right of Part No.

WARNING

⚠ (*) INDICATES SAFETY CRITICAL COMPONENTS. FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURE'S RECOMMENDED PARTS.

AVERTISSEMENT

⚠ (*) IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉDE L'APPAREIL, NE REMPLACER QUE DES PIÉCES RECOMMANDÉES PAR LE FABRICANT.

1. RECOMMENDED SPARE PARTS

We suggest you to stock the following Recommended Spare Part items listed below since they can cover most of the routine service.

Ref. No.	Part No.	Description
1	AV-B1063A010C	REMOCON BLK RC-W501E [EOH-V]
2	AV-B1063A010D	REMOCON BLK RC-W501G [EOG-V]
3	AV-B1064A010C	REMOCON BLK RC-W502E [EXCEPT EOG-V/EOH-V]
4	BB-V1130A020J	MECHA DECK BLK G51EA
5	BL-V1102A140A	ARM LOADING BLK 425EA
6	BL-387458J2	CAPSTAN BRAKE PART
7	BL-V1123A050A	TENSION ARM BLK F600EA
8	BM-400682J3	MOTOR DFX-67B3VWB2 [CAPSTAN MOTOR]
9	BM-401296J1	MOTOR E20EL89 [DRUM MOTOR]
10	BM-387503J	MOTOR PART [LOADING MOTOR]
11	*BT-410491J	TRANS POW V1130 EDG [EDG]
12	*BT-410488J	TRANS POW V1130 EM [EM]
13	*BT-403873J	TRANS POW V1130 EO [EO]
14	*BT-410606J	TRANS POW V1146 EOG-V [EOG-V/EOH/EOH-V]
15	*BT-416855J	TRANS POW V1164 EA [EA]
16	BV-V1102A150A	CASSETTE LOAD BLK 425EA
17	BV-V1102A070A	LEADER S BLK 425EA
18	BV-V1102A080A	LEADER T BLK 425EA
19	BV-V1123A410B	LOWER DRUM BLK X450EGN
20	BV-403409J	RF CONVERTER MDLK6D755A EO [EXCEPT EA/EDG/EM]
21	BV-403408J	RF CONVERTER MDLK6E753A EDG [EDG]
22	BV-387611J1	RF CONVERTER YAA21-0808G EV [EM]
23	BV-387610J1	RF CONVERTER YAA21-0809G EA [EA]
24	BV-V1123A420B	UPPER DRUM BLK X450EGN
25	BV-403236J1	VIF UNIT KX EA [EA]
26	BV-403239J1	VIF UNIT KX EM [EM]
27	BV-403241J1	VIF UNIT KX EOG [EO]
28	BV-403240J1	VIF UNIT KX EOH [EOH/EOH-V]
29	BV-416729J	VIF UNIT KX-TEK EOG [EOG-V]
30	BV-412399J	VIF UNIT KX-38.9 EDG [EDG]
31	*EC-391843J	C DOUBLE FYD0H223Z 5.5DC
32	EC-408376J	C EC V CUT KMG 102M 50.0DC
33	*EC-410530J	C EC V CUT KMG 332M 50.0DC
34	EC-408426J	C EC V F05 LXF8 121M 50.0DC
35	EC-403371J	C EC V F05 LXF8 221M 25.0DC
36	EC-403878J	C EC V T05 LXF8 271M 16.0DC
37	EC-404197J	C EC V T05 SXE8 330M 80.0DC
38	ED-397391J	D LED BR3668S RED
39	ED-390011J	D LED GL451 INFRARED [D1]
40	ED-403450J	D LED SE303ARF-C INFRARED
41	ED-401099J	D SCHOTTKY MA719 T26 40/0.5A [EOG-V]
42	*ED-386226J	D SCHOTTKY RB100AT-32T26 40/1
43	ED-386031J	D SILICON CHIP MA110-TW
44	*ED-379298	D SILICON DBA20B 100/2.0A
45	ED-366443	D SILICON H MA700FA5 F10
46	ED-307572	D SILICON H 1SS131
47	ED-366684	D SILICON H 1SS136 F05
48	ED-401046J	D SILICON RL104F-E T26 400/1A
49	ED-511907	D SILICON 1N4002 100/1.0A
50	*ED-412107J	D SILICON 1N4003 T26 200/1.0A
51	ED-402204J	D ZENER H HZS11A3 [EA/EDG]
52	ED-391005J	D ZENER H HZS12B1
53	ED-396058J	D ZENER H HZS12B3 [EO]
54	ED-410359J	D ZENER H HZS15-1 T26
55	ED-397319J	D ZENER H HZS15-2
56	ED-404387J	D ZENER H HZS16-1
57	ED-408721J	D ZENER H HZS2B3
58	ED-402230J	D ZENER H HZS36-1
59	ED-408912J	D ZENER H HZS36-3
60	ED-412105J	D ZENER H HZS5B1 T26
61	ED-397233J	D ZENER H HZS5C3
62	ED-387919J	D ZENER H HZS6A1L
63	ED-378530J	D ZENER H HZS6B2L
64	ED-403743J	D ZENER H HZS6B3
65	ED-405603J	D ZENER H MTZJ10B T26 [EXCEPT EA/EDG/EM]
66	ED-404170J	D ZENER H MTZJ2.0A T26 [EOH/EOG-V/EOH-V]
67	ED-403267J	D ZENER H MTZJ3.3B T26
68	ED-405524J	D ZENER H MTZJ36A T26
69	ED-405604J	D ZENER H MTZJ4.3C T26 [EXCEPT EA/EDG/EM]
70	ED-403724J	D ZENER H UTZJ10A
71	ED-405264J	D ZENER H UTZJ10C
72	ED-404031J	D ZENER H UTZJ11B T26
73	ED-403265J	D ZENER H UTZJ15A T26
74	ED-403948J	D ZENER H UTZJ16C T26
75	ED-403947J	D ZENER H UTZJ22C T26
76	ED-403726J	D ZENER H UTZJ30B [EOG-V]
77	ED-404033J	D ZENER H UTZJ33B
78	ED-405265J	D ZENER H UTZJ36C
79	ED-404032J	D ZENER H UTZJ39A
80	ED-403732J	D ZENER H UTZJ5.6A
81	ED-405446J	D ZENER H UTZJ5.6B T26
82	ED-403729J	D ZENER H UTZJ5.6C
83	ED-403730J	D ZENER H UTZJ6.2A [EOG-V]
84	ED-404086J	D ZENER H UTZJ7.5C
85	ED-403731J	D ZENER H UTZJ8.2C [EOH/EOG-V/EOH-V]
86	ED-403279J	D ZENER H UTZJ9.1B
87	EE-412395J	TV TUNER ENV-578C9F1 EOH [EOH/EOH-V]
88	EE-416524J	TV TUNER TEKE4-034 EOG [EOG-V]
89	EE-387604J3	TV TUNER TERE1-007D EOG [EO]
90	EE-387603J1	TV TUNER TERE1-019B EO [EDG]
91	EE-408417J	TV TUNER VTSS6AZV EA [EA]
92	EE-405638J	TV TUNER VTSS6CZ EM [EM]
93	*EF-413079J	FUSE S505 T 250V 1.00A
94	EH-383056J	COMP R RGLE4X 103J
95	EH-386637J	COMP R RGLE8X 103J
96	EH-394838J	DL ADL-FN1344Q [EM/EOH (Y1)]
97	EH-416491J	DL EFDJLA13A
98	EH-394874J	FILTER CE SAF38.9MZA70Z
99	EH-730625J	FILTER CE SAF38.9MZW70Z [EXCEPT EA]
100	EH-373920	FILTER CE SFE5.5MB
101	EH-373921	FILTER CE SFE6.0MB
102	EH-412432J	FILTER CE SFSH6.5MDB 6.500MHZ
103	EH-368827	FILTER CE SFS5.5MD 5.500MHZ
104	EH-373918	FILTER CE TPS5.5MB
105	EH-729986J	FILTER CE TPS5.5MB2 [EM]
106	EH-368948	FILTER CE TPS5.5MW 5.5000MHZ [EXCEPT EM]
107	EH-376338	FILTER CE TPS6.5MB
108	EH-714626	FILTER SAW SAF36.9MZ70Z [EA]
109	EI-394680J	IC AN3171K
110	EI-373981J1	IC BA10393N
111	EI-373980	IC BA15218N
112	EI-386468J	IC BA3308
113	*EI-381575J	IC BA6121
114	EI-353421	IC BA6229
115	EI-366892	IC BA7025L [EDG/EM/EOG-V]

Ref. No.	Part No.	Description
116	EI-414860J	IC BA7279S
117	EI-388360J	IC BA7765AS
118	EI-356457	IC BU4013B
119	EI-414885J	IC CF72306
120	EI-414884J	IC CF72307
121	EI-360586	IC LA6358S
122	EI-403234J1	IC LA7391A
123	EI-394856J	IC LC8992
124	EI-394861J	IC LVA521S-2 [EOH/EOG-V/EOH-V]
125	EI-401050J	IC LVA523SA2
126	EI-389622J	IC L5631
127	EI-387019J	IC MC1377P
128	EI-403469J	IC MM1068XS
129	EI-414824J	IC MN675201A-XDT QFXSYP1
130	EI-408434J	IC MV1815-1BA
131	EI-414772J	IC M50933-132FP QXLCDR1
132	EI-368809	IC M51496P
133	EI-403964J	IC NJM2245L [EOH/EOG-V/EOH-V]
134	EI-400756J	IC NJM4558L-B
135	EI-400672J	IC S-8052ALB-LE
136	EI-373955	IC S-8053ALR
137	EI-385958J	IC SAA4700
138	EI-408393J	IC ST24C01B1
139	EI-405224J	IC ST24C02AB1/AAB
140	EI-410265J	IC ST24C04B1
141	EI-200573	IC TC4053BP [EM/EOH (Y1)]
142	EI-310036	IC TC4066BP
143	EI-405722J	IC UPD6450CX-515
144	EI-416509J	IC UPD75004GB-880-3B4 QVPTR1
145	EI-414819J	IC UPD75217CW-187 QFXOPP1 [EA/EDG/EM/EO]
146	EI-414820J	IC UPD75217CW-188 QFXOPD1 [EOH/EOH-V]
147	EI-416737J	IC UPD75217CW-195 QBXOPG1 [EOG-V]
148	EI-410521J2	IC UPD75218CW-028 JXPDC3
149	EI-416782J	IC UPD78014CW-019 QXVPT1
150	EI-410125J	IC V53C464AP-80
151	EI-403451J	OSC CE CSB1200J 1.200MHZ
152	EI-403467J	OSC CE CSB500F40 15.680KHZ
153	EI-368829	OSC CE CSB512P
154	EI-414889J	OSC CE CST10.0MTW-TF01 T05
155	EI-408450J	OSC CE CST2.45MGW 2.450MHZ
156	EI-367882J1	OSC CE FCR4.19MC3 4.190MHZ
157	EI-368825M	OSC X'TAL C-002RX 32.768KHZ
158	EI-408433J	OSC X'TAL HC-43/U 27750KHZ
159	EI-394675J	OSC X'TAL HC-49/U 13875KHZ
160	EI-389974J	OSC X'TAL HC-49/U 17.734475MHZ
161	EI-389640N	OSC X'TAL HC-49/U 8000KHZ
162	EI-394673J	OSC X'TAL HC-49/U 8867.238KHZ
163	EI-381632J	OSC X'TAL 86686 4.433619MHZ
164	EJ-412291J	TERMINAL LCD (6) B1043
165	EM-414778J	IND FL FV506GA CHARACTER [EXCEPT EOH/EOH-V]
166	EM-414777J	IND FL FV562GA CHARACTER [EOH/EOH-V]
167	EM-408437J	IND LCD LD-B5444A ENGLISH
168	EO-408381J	COIL FIX 2 C-5344-40 560K
169	*EQ-400153J	RELAY POW AG2013 1TR 12V
170	*ER-328278	R FUSE H ERD2FC 1/4W 10R0G
171	*ER-307565	R FUSE H S10 ERD2FC 1/4W 6R8J
172	*ER-328519	R FUSE H S10 ERD2FC 1/4W 68R0G
173	*ER-331188	R FUSE H S10 ERD2FC 1/4W 8R2J
174	*ER-401039J	R FUSE V T05 ERD2FCV 1/4W 4R7J
175	*ER-400959J	R FUSE V T05 ERD2FCV 1/4W1200G
176	*ER-400605J	R FUSE V T05 ERD2FCV 1/4W15R0G
177	*ER-400688J	R FUSE V T05 RF25SCVTP1/4WR10K
178	*ER-400728J	R FUSE V T05 RF25SCVTP1/4WR12K
179	*ER-405441J	R FUSE V T05 RF25SCVTP1/4WR27K
180	*ER-400729J	R FUSE V T05 RF25SCVTP1/4WR47K
181	*ER-404093J	R FUSE V T05 RF25SCVTP1/4WR56K [EXCEPT EA/EDG/EM]
182	*ER-400689J	R FUSE V T05 RF25SCVTP1/4WR68K
183	*ER-408375J	R FUSE V T05RF25SCPVTP1/4WR12K
184	ES-373099	SW LEAF MTS10110MPC1
185	ES-408470J	SW MICRO HXW0593-01-100 01-1 [S-SW]
186	ES-387465J	SW MODE SELECT MMS00070ZLBO [SW1]

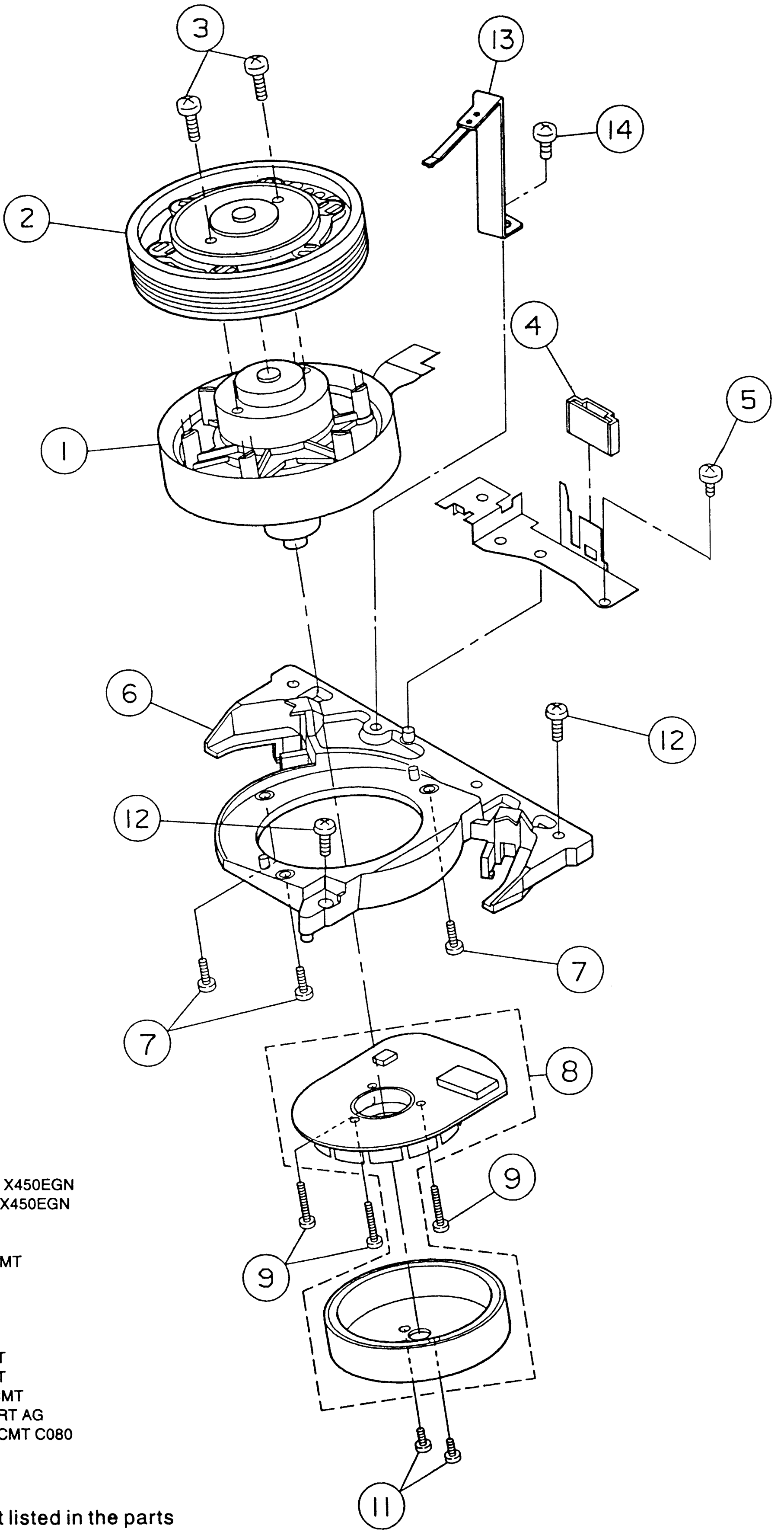
Ref. No.	Part No.	Description
187	ES-414853J	SW ROTARY ENCODER SRGPHJ ADAP.
188	ES-408428J	SW ROTARY ENCODER SRGPPJ
189	ES-393431J	SW TACT CHIP SKHUAB T12E
190	ES-349474	SW TACT SKHHAM004A
191	ET-411995J	DETECTOR GP1U581X
192	ET-403420J	DETECTOR SG-105LF [PH1][PH2]
193	ET-724885J	TR CHIP RT1N141C [EO/EOG-V]
194	ET-713614	TR CHIP 2SA1235 E,F
195	ET-725820J	TR CHIP 2SC2735J
196	ET-356336	TR DTA114ES
197	ET-363953	TR DTA114TS [EM/EOH (Y1)]
198	ET-360646	TR DTA143ES [EM/EOH (Y1)]
199	ET-354415	TR DTA144ES
200	ET-373985	TR DTA144TS
201	ET-353897	TR DTC114ES
202	ET-360399	TR DTC114TS
203	ET-354364	TR DTC143TS
204	ET-354414	TR DTC144ES
205	ET-370310	TR DTC144TS [EOH/EOG-V/EOH-V]
206	ET-361490	TR PHOTO PN268 [TR1]
207	ET-390009J	TR PHOTO PT493F [TR4]
208	ET-364040	TR UN421D
209	ET-353899	TR 2SA1317 S,T,U
210	ET-389803J	TR 2SA933S R,S
211	*ET-366365	TR 2SB1185 E,F
212	ET-388338J	TR 2SB1425 S,E
213	*ET-408841J	TR 2SB1565 E,F
214	*ET-356817	TR 2SB891 Q,R
215	ET-400218J	TR 2SC1740S R,S
216	ET-414816J	TR 2SC2668 Y T05
217	ET-397160J	TR 2SC3330 R,S,T,U,V
218	*ET-404195J	TR 2SC4486 S,T T05
219	*ET-354083	TR 2SD1189 Q,R
220	ET-366168	TR 2SD1292 Q,R [EOG-V]
221	*ET-381175J	TR 2SD1856
222	*ET-391025J	TR 2SD2012
223	ET-405622J	TR 2SD2061 E,F [EXCEPT EA/EDG/EM]
224	*ET-408842J	TR 2SD2394 E,F
225	*ET-411668J	TR 2SD2395 E,F
226	ET-370819	TR.CHIP 2SC3052
227	ET-405342J	TR.CHIP 2SD1620
228	HE-390013J	HEAD E HVFME0020A
229	HR-405340J	HEAD COMBO HVMZA1121A
230	MB-407117J	BELT CAPSTAN (3)
231	MB-412384J	KEY RUBBER (V1)-2
232	MB-414495J	KEY RUBBER (V2)-E
233	MB-414479J	KEY RUBBER (W)-E
234	MI-404552J1	IDLER (2) PART
235	ML-391745J3	ARM DAMPER
236	ML-387350J1	ARM LID OPENER
237	ML-387277J4	ARM REVIEW PART
238	ML-387402J1	LEVER TRIGGER
239	ML-387316J	MAIN BRAKE (S) PART
240	ML-387318J	MAIN BRAKE (T) PART
241	ML-407119J	REVIEW BRAKE (3) PART
242	ML-404567J1	SLIDER BRAKE (3) PART
243	ML-404944J	SLIDER TRIGGER (2)
244	MP-404852J	PINCH ROLLER (2) PART
245	MR-387406J	HOLDER THRUST WORM
246	MR-391968J	PULLEY TRIGGER (2)
247	MR-407378J1	ROLLER IMPEDANCE (2)
248	MT-404547J1	DISK (3) PART
249	MZ-404577J	DISK CLUTCH (2) PART
250	MZ-404538J	GEAR CAM SLIDER (3)
251	MZ-387335J	GEAR EJECT
252	MZ-387333J1	GEAR FRONT LOADING
253	MZ-404995J	GEAR MID PART
254	MZ-V1102A090A	GEAR TOGGLE (S) BLK 425EA
255	MZ-V1102A100A	GEAR TOGGLE (T) BLK 425EA
256	MZ-387332J	GEAR WORM WHEEL
257	MZ-409537J	GEAR WORM (2) PART

Ref. No.	Part No.	Description
116	EI-414860J	IC BA7279S
117	EI-388360J	IC BA7765AS
118	EI-356457	IC BU4013B
119	EI-414885J	IC CF72306
120	EI-414884J	IC CF72307
121	EI-360586	IC LA6358S
122	EI-403234J1	IC LA7391A
123	EI-394856J	IC LC8992
124	EI-394861J	IC LVA521S-2 [EOH/EOG-V/EOH-V]
125	EI-401050J	IC LVA523SA2
126	EI-389622J	IC L5631
127	EI-387019J	IC MC1377P
128	EI-403469J	IC MM1068XS
129	EI-414824J	IC MN675201A-XDT QFXSYP1
130	EI-408434J	IC MV1815-1BA
131	EI-414772J	IC M50933-132FP QXLCDR1
132	EI-368809	IC M51496P
133	EI-403964J	IC NJM2245L [EOH/EOG-V/EOH-V]
134	EI-400756J	IC NJM4558L-B
135	EI-400672J	IC S-8052ALB-LE
136	EI-373955	IC S-8053ALR
137	EI-385958J	IC SAA4700
138	EI-408393J	IC ST24C01B1
139	EI-405224J	IC ST24C02AB1/AAB
140	EI-410265J	IC ST24C04B1
141	EI-200573	IC TC4053BP [EM/EOH (Y1)]
142	EI-310036	IC TC4066BP
143	EI-405722J	IC UPD6450CX-515
144	EI-416509J	IC UPD75004GB-880-3B4 QVPTR1
145	EI-414819J	IC UPD75217CW-187 QFXOPP1 [EA/EDG/EM/EO]
146	EI-414820J	IC UPD75217CW-188 QFXOPD1 [EOH/EOH-V]
147	EI-416737J	IC UPD75217CW-195 QBXOPG1 [EOG-V]
148	EI-410521J2	IC UPD75218CW-028 JXPDC3
149	EI-416782J	IC UPD78014CW-019 QXVPT1
150	EI-410125J	IC V53C464AP-80
151	EI-403451J	OSC CE CSB1200J 1.200MHZ
152	EI-403467J	OSC CE CSB500F40 15.680KHZ
153	EI-368829	OSC CE CSB512P
154	EI-414889J	OSC CE CST10.0MTW-TF01 T05
155	EI-408450J	OSC CE CST2.45MGW 2.450MHZ
156	EI-367882J1	OSC CE FCR4.19MC3 4.190MHZ
157	EI-368825M	OSC X'TAL C-002RX 32.768KHZ
158	EI-408433J	OSC X'TAL HC-43/U 27750KHZ
159	EI-394675J	OSC X'TAL HC-49/U 13875KHZ
160	EI-389974J	OSC X'TAL HC-49/U 17.734475MHZ
161	EI-389640N	OSC X'TAL HC-49/U 8000KHZ
162	EI-394673J	OSC X'TAL HC-49/U 8867.238KHZ
163	EI-381632J	OSC X'TAL 86686 4.433619MHZ
164	EJ-412291J	TERMINAL LCD (6) B1043
165	EM-414778J	IND FL FV506GA CHARACTER [EXCEPT EOH/EOH-V]
166	EM-414777J	IND FL FV562GA CHARACTER [EOH/EOH-V]
167	EM-408437J	IND LCD LD-B5444A ENGLISH
168	EO-408381J	COIL FIX 2 C-5344-40 560K
169	*EQ-400153J	RELAY POW AG2013 1TR 12V
170	*ER-328278	R FUSE H ERD2FC 1/4W 10R0G
171	*ER-307565	R FUSE H S10 ERD2FC 1/4W 6R8J
172	*ER-328519	R FUSE H S10 ERD2FC 1/4W 68R0G
173	*ER-331188	R FUSE H S10 ERD2FC 1/4W 8R2J
174	*ER-401039J	R FUSE V T05 ERD2FCV 1/4W 4R7J
175	*ER-400959J	R FUSE V T05 ERD2FCV 1/4W1200G
176	*ER-400605J	R FUSE V T05 ERD2FCV 1/4W15R0G
177	*ER-400688J	R FUSE V T05 RF25SCVTP1/4WR10K
178	*ER-400728J	R FUSE V T05 RF25SCVTP1/4WR12K
179	*ER-405441J	R FUSE V T05 RF25SCVTP1/4WR27K
180	*ER-400729J	R FUSE V T05 RF25SCVTP1/4WR47K
181	*ER-404093J	R FUSE V T05 RF25SCVTP1/4WR56K [EXCEPT EA/EDG/EM]
182	*ER-400689J	R FUSE V T05 RF25SCVTP1/4WR68K
183	*ER-408375J	R FUSE V T05RF25SCPVTP1/4WR12K
184	ES-373099	SW LEAF MTS10110MPC1
185	ES-408470J	SW MICRO HXW0593-01-100 01-1 [S-SW]
186	ES-387465J	SW MODE SELECT MMS00070ZLBO [SW1]
187	ES-414853J	SW ROTARY ENCODER SRGPHJ ADAP.
188	ES-408428J	SW ROTARY ENCODER SRGPPJ
189	ES-393431J	SW TACT CHIP SKHUAB T12E
190	ES-349474	SW TACT SKHHAM004A
191	ET-411995J	DETECTOR GP1U581X
192	ET-403420J	DETECTOR SG-105LF [PH1][PH2]
193	ET-724885J	TR CHIP RT1N141C [EO/EOG-V]
194	ET-713614	TR CHIP 2SA1235 E,F
195	ET-725820J	TR CHIP 2SC2735J
196	ET-356336	TR DTA114ES
197	ET-363953	TR DTA114TS [EM/EOH (Y1)]
198	ET-360646	TR DTA143ES [EM/EOH (Y1)]
199	ET-354415	TR DTA144ES
200	ET-373985	TR DTA144TS
201	ET-353897	TR DTC114ES
202	ET-360399	TR DTC114TS
203	ET-354364	TR DTC143TS
204	ET-354414	TR DTC144ES
205	ET-370310	TR DTC144TS [EOH/EOG-V/EOH-V]
206	ET-361490	TR PHOTO PN268 [TR1]
207	ET-390009J	TR PHOTO PT493F [TR4]
208	ET-364040	TR UN421D
209	ET-353899	TR 2SA1317 S,T,U
210	ET-389803J	TR 2SA933S R,S
211	*ET-366365	TR 2SB1185 E,F
212	ET-388338J	TR 2SB1425 S,E
213	*ET-408841J	TR 2SB1565 E,F
214	*ET-356817	TR 2SB891 Q,R
215	ET-400218J	TR 2SC1740S R,S
216	ET-414816J	TR 2SC2668 Y T05
217	ET-397160J	TR 2SC3330 R,S,T,U,V
218	*ET-404195J	TR 2SC4486 S,T T05
219	*ET-354083	TR 2SD1189 Q,R
220	ET-366168	TR 2SD1292 Q,R [EOG-V]
221	*ET-381175J	TR 2SD1856
222	*ET-391025J	TR 2SD2012
223	ET-405622J	TR 2SD2061 E,F [EXCEPT EA/EDG/EM]
224	*ET-408842J	TR 2SD2394 E,F
225	*ET-411668J	TR 2SD2395 E,F
226	ET-370819	TR.CHIP 2SC3052
227	ET-405342J	TR.CHIP 2SD1620
228	HE-390013J	HEAD E HVFME0020A
229	HR-405340J	HEAD COMBO HVMZA1121A
230	MB-407117J	BELT CAPSTAN (3)
231	MB-412384J	KEY RUBBER (V1)-2
232	MB-414495J	KEY RUBBER (V2)-E
233	MB-414479J	KEY RUBBER (W)-E
234	MI-404552J1	IDLER (2) PART
235	ML-391745J3	ARM DAMPER
236	ML-387350J1	ARM LID OPENER
237	ML-387277J4	ARM REVIEW PART
238	ML-387402J1	LEVER TRIGGER
239	ML-387316J	MAIN BRAKE (S) PART
240	ML-387318J	MAIN BRAKE (T) PART
241	ML-407119J	REVIEW BRAKE (3) PART
242	ML-404567J1	SLIDER BRAKE (3) PART
243	ML-404944J	SLIDER TRIGGER (2)
244	MP-404852J	PINCH ROLLER (2) PART
245	MR-387406J	HOLDER THRUST WORM
246	MR-391968J	PULLEY TRIGGER (2)
247	MR-407378J1	ROLLER IMPEDANCE (2)
248	MT-404547J1	DISK (3) PART
249	MZ-404577J	DISK CLUTCH (2) PART
250	MZ-404538J	GEAR CAM SLIDER (3)
251	MZ-387335J	GEAR EJECT
252	MZ-387333J1	GEAR FRONT LOADING
253	MZ-404995J	GEAR MID PART
254	MZ-V1102A090A	GEAR TOGGLE (S) BLK 425EA
255	MZ-V1102A100A	GEAR TOGGLE (T) BLK 425EA
256	MZ-387332J	GEAR WORM WHEEL
257	MZ-409537J	GEAR WORM (2) PART

Ref. No.	Part No.	Description
116	EI-414860J	IC BA7279S
117	EI-388360J	IC BA7765AS
118	EI-356457	IC BU4013B
119	EI-414885J	IC CF72306
120	EI-414884J	IC CF72307
121	EI-360586	IC LA6358S
122	EI-403234J1	IC LA7391A
123	EI-394856J	IC LC8992
124	EI-394861J	IC LVA521S-2 [EOH/EOG-V/EOH-V]
125	EI-401050J	IC LVA523SA2
126	EI-389622J	IC L5631
127	EI-387019J	IC MC1377P
128	EI-403469J	IC MM1068XS
129	EI-414824J	IC MN675201A-XDT QFXSYP1
130	EI-408434J	IC MV1815-1BA
131	EI-414772J	IC M50933-132FP QXLCDR1
132	EI-368809	IC M51496P
133	EI-403964J	IC NJM2245L [EOH/EOG-V/EOH-V]
134	EI-400756J	IC NJM4558L-B
135	EI-400672J	IC S-8052ALB-LE
136	EI-373955	IC S-8053ALR
137	EI-385958J	IC SAA4700
138	EI-408393J	IC ST24C01B1
139	EI-405224J	IC ST24C02AB1/AAB
140	EI-410265J	IC ST24C04B1
141	EI-200573	IC TC4053BP [EM/EOH (Y1)]
142	EI-310036	IC TC4066BP
143	EI-405722J	IC UPD6450CX-515
144	EI-416509J	IC UPD75004GB-880-3B4 QVPTR1
145	EI-414819J	IC UPD75217CW-187 QFXOPP1 [EA/EDG/EM/EO]
146	EI-414820J	IC UPD75217CW-188 QFXOPD1 [EOH/EOH-V]
147	EI-416737J	IC UPD75217CW-195 QBXOPG1 [EOG-V]
148	EI-410521J2	IC UPD75218CW-028 JXPDC3
149	EI-416782J	IC UPD78014CW-019 QXVPT1
150	EI-410125J	IC V53C464AP-80
151	EI-403451J	OSC CE CSB1200J 1.200MHZ
152	EI-403467J	OSC CE CSB500F40 15.680KHZ
153	EI-368829	OSC CE CSB512P
154	EI-414889J	OSC CE CST10.0MTW-TF01 T05
155	EI-408450J	OSC CE CST2.45MGW 2.450MHZ
156	EI-367882J1	OSC CE FCR4.19MC3 4.190MHZ
157	EI-368825M	OSC X'TAL C-002RX 32.768KHZ
158	EI-408433J	OSC X'TAL HC-43/U 27750KHZ
159	EI-394675J	OSC X'TAL HC-49/U 13875KHZ
160	EI-389974J	OSC X'TAL HC-49/U 17.734475MHZ
161	EI-389640N	OSC X'TAL HC-49/U 8000KHZ
162	EI-394673J	OSC X'TAL HC-49/U 8867.238KHZ
163	EI-381632J	OSC X'TAL 86686 4.433619MHZ
164	EJ-412291J	TERMINAL LCD (6) B1043
165	EM-414778J	IND FL FV506GA CHARACTER [EXCEPT EOH/EOH-V]
166	EM-414777J	IND FL FV562GA CHARACTER [EOH/EOH-V]
167	EM-408437J	IND LCD LD-B5444A ENGLISH
168	EO-408381J	COIL FIX 2 C-5344-40 560K
169	*EQ-400153J	RELAY POW AG2013 1TR 12V
170	*ER-328278	R FUSE H ERD2FC 1/4W 10R0G
171	*ER-307565	R FUSE H S10 ERD2FC 1/4W 6R8J
172	*ER-328519	R FUSE H S10 ERD2FC 1/4W 68R0G
173	*ER-331188	R FUSE H S10 ERD2FC 1/4W 8R2J
174	*ER-401039J	R FUSE V T05 ERD2FCV 1/4W 4R7J
175	*ER-400959J	R FUSE V T05 ERD2FCV 1/4W1200G
176	*ER-400605J	R FUSE V T05 ERD2FCV 1/4W15R0G
177	*ER-400688J	R FUSE V T05 RF25SCVTP1/4WR10K
178	*ER-400728J	R FUSE V T05 RF25SCVTP1/4WR12K
179	*ER-405441J	R FUSE V T05 RF25SCVTP1/4WR27K
180	*ER-400729J	R FUSE V T05 RF25SCVTP1/4WR47K
181	*ER-404093J	R FUSE V T05 RF25SCVTP1/4WR56K [EXCEPT EA/EDG/EM]
182	*ER-400689J	R FUSE V T05 RF25SCVTP1/4WR68K
183	*ER-408375J	R FUSE V T05RF25SCPVTP1/4WR12K
184	ES-373099	SW LEAF MTS10110MPC1
185	ES-408470J	SW MICRO HXW0593-01-100 01-1 [S-SW]
186	ES-387465J	SW MODE SELECT MMS00070ZLBO [SW1]

Ref. No.	Part No.	Description
187	ES-414853J	SW ROTARY ENCODER SRGPHJ ADAP.
188	ES-408428J	SW ROTARY ENCODER SRGPPJ
189	ES-393431J	SW TACT CHIP SKHUAB T12E
190	ES-349474	SW TACT SKHHAM004A
191	ET-411995J	DETECTOR GP1U581X
192	ET-403420J	DETECTOR SG-105LF [PH1][PH2]
193	ET-724885J	TR CHIP RT1N141C [EO/EOG-V]
194	ET-713614	TR CHIP 2SA1235 E,F
195	ET-725820J	TR CHIP 2SC2735J
196	ET-356336	TR DTA114ES
197	ET-363953	TR DTA114TS [EM/EOH (Y1)]
198	ET-360646	TR DTA143ES [EM/EOH (Y1)]
199	ET-354415	TR DTA144ES
200	ET-373985	TR DTA144TS
201	ET-353897	TR DTC114ES
202	ET-360399	TR DTC114TS
203	ET-354364	TR DTC143TS
204	ET-354414	TR DTC144ES
205	ET-370310	TR DTC144TS [EOH/EOG-V/EOH-V]
206	ET-361490	TR PHOTO PN268 [TR1]
207	ET-390009J	TR PHOTO PT493F [TR4]
208	ET-364040	TR UN421D
209	ET-353899	TR 2SA1317 S,T,U
210	ET-389803J	TR 2SA933S R,S
211	*ET-366365	TR 2SB1185 E,F
212	ET-388338J	TR 2SB1425 S,E
213	*ET-408841J	TR 2SB1565 E,F
214	*ET-356817	TR 2SB891 Q,R
215	ET-400218J	TR 2SC1740S R,S
216	ET-414816J	TR 2SC2668 Y T05
217	ET-397160J	TR 2SC3330 R,S,T,U,V
218	*ET-404195J	TR 2SC4486 S,T T05
219	*ET-354083	TR 2SD1189 Q,R
220	ET-366168	TR 2SD1292 Q,R [EOG-V]
221	*ET-381175J	TR 2SD1856
222	*ET-391025J	TR 2SD2012
223	ET-405622J	TR 2SD2061 E,F [EXCEPT EA/EDG/EM]
224	*ET-408842J	TR 2SD2394 E,F
225	*ET-411668J	TR 2SD2395 E,F
226	ET-370819	TR.CHIP 2SC3052
227	ET-405342J	TR.CHIP 2SD1620
228	HE-390013J	HEAD E HVFME0020A
229	HR-405340J	HEAD COMBO HVMZA1121A
230	MB-407117J	BELT CAPSTAN (3)
231	MB-412384J	KEY RUBBER (V1)-2
232	MB-414495J	KEY RUBBER (V2)-E
233	MB-414479J	KEY RUBBER (W)-E
234	MI-404552J1	IDLER (2) PART
235	ML-391745J3	ARM DAMPER
236	ML-387350J1	ARM LID OPENER
237	ML-387277J4	ARM REVIEW PART
238	ML-387402J1	LEVER TRIGGER
239	ML-387316J	MAIN BRAKE (S) PART
240	ML-387318J	MAIN BRAKE (T) PART
241	ML-407119J	REVIEW BRAKE (3) PART
242	ML-404567J1	SLIDER BRAKE (3) PART
243	ML-404944J	SLIDER TRIGGER (2)
244	MP-404852J	PINCH ROLLER (2) PART
245	MR-387406J	HOLDER THRUST WORM
246	MR-391968J	PULLEY TRIGGER (2)
247	MR-407378J1	ROLLER IMPEDANCE (2)
248	MT-404547J1	DISK (3) PART
249	MZ-404577J	DISK CLUTCH (2) PART
250	MZ-404538J	GEAR CAM SLIDER (3)
251	MZ-387335J	GEAR EJECT
252	MZ-387333J1	GEAR FRONT LOADING
253	MZ-404995J	GEAR MID PART
254	MZ-V1102A090A	GEAR TOGGLE (S) BLK 425EA
255	MZ-V1102A100A	GEAR TOGGLE (T) BLK 425EA
256	MZ-387332J	GEAR WORM WHEEL
257	MZ-409537J	GEAR WORM (2) PART

HEAD DRUM BLOCK

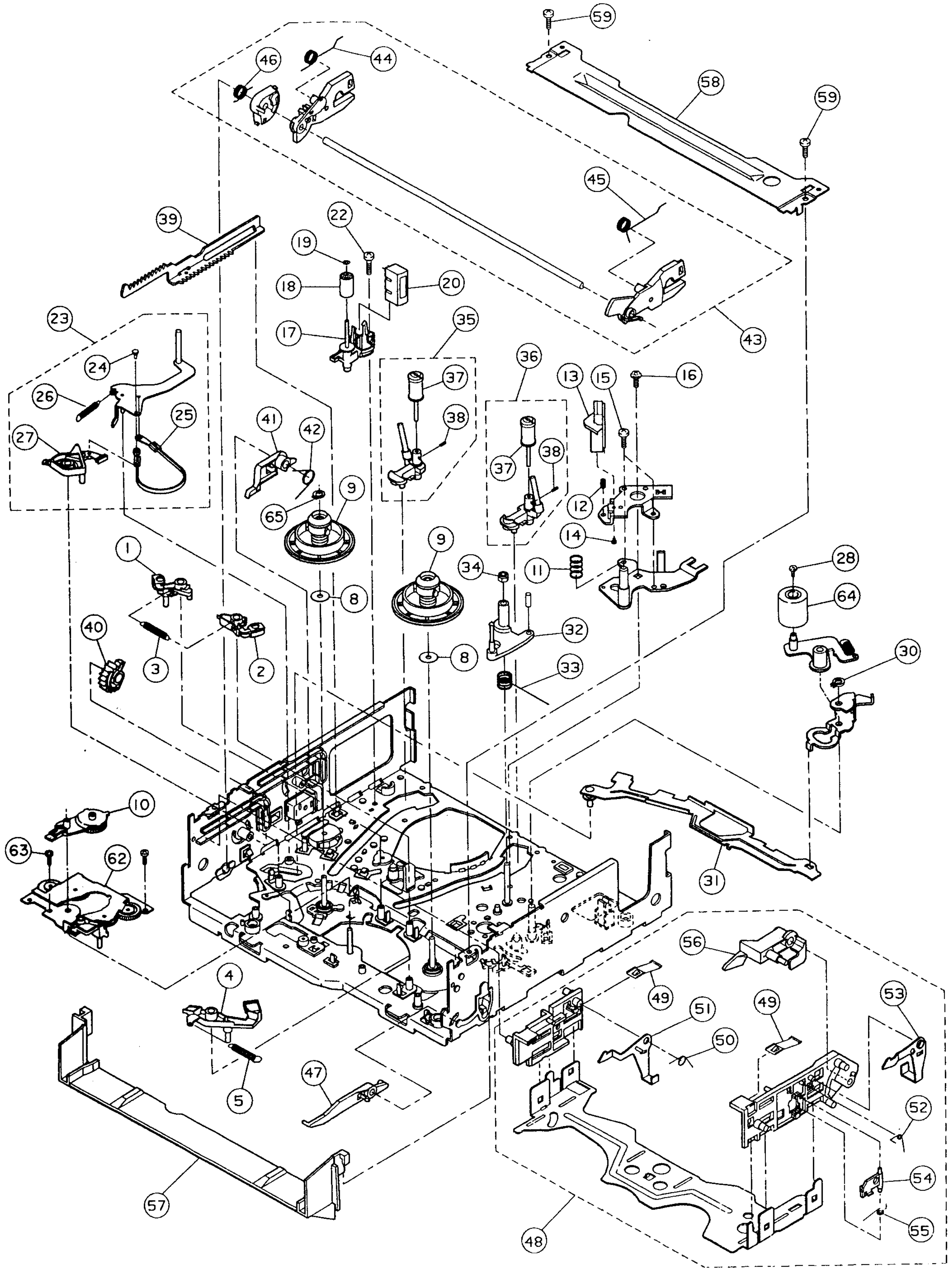


2. HEAD DRUM BLOCK

Ref. No.	Part No.	Description
1	BV-V1123A410B	LOWER DRUM BLK X450EGN
2	BV-V1123A420B	UPPER DRUM BLK X450EGN
3	ZS-321298	BID30X08STL CMT
4	SZ-387388J	HOLDER FPC
5	ZS-358936	ST BID30X06STL CMT
6	MA-387474J3	BASE DRUM
7	ZS-563444	BID26X08STL CMT
8	BM-401296J1	MOTOR E20EL89 [DRUM MOTOR]
9	ZS-467796	PAN26X12STL CMT
11	ZS-379350	PAN30X06STL CMT
12	ZS-336714	ST BID30X12STL CMT
13	VT-401282J	EARTH BRUSH PART AG
14	ZS-409216J	ST PAN30X07STL CMT C080

NOTE:
Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

MECHA BLOCK (1)



3. MECHA BLOCK (1)

Ref. No.	Part No.	Description
1	ML-387316J	MAIN BRAKE (S) PART
2	ML-387318J	MAIN BRAKE (T) PART
3	ZG-387320J	SP PULL MAIN BRAKE
4	ML-407119J	REVIEW BRAKE (3) PART
5	ZG-387323J	SP PULL REVIEW BRAKE
8	ZW-389814J	PW31X110X050PSL
9	MT-404547J1	DISK (3) PART
10	MI-404552J1	IDLER (2) PART
11	ZG-387438J1	SP PUSH A/C
12	ZS-410851J	PAN30X070STL CMT CP
13	HR-405340J	HEAD COMBO HVMZA1121A
14	ZS-404844J	PAN20X02STL BZN PS1
15	ZS-321298	BID30X08STL CMT
16	ZS-409216J	ST PAN30X07STL CMT C080
17	MZ-407375J1	HOLDER FE HEAD (2) PART
18	MR-407378J1	ROLLER IMPEDANCE (2)
19	ZW-409602J	SLIT W17X035X025PSL
20	HE-390013J	HEAD E HVFME0020A
22	ZS-336714	ST BID30X12STL CMT
23	BL-V1123A050A	TENSION ARM BLK F600EA
24	SZ-387263J4	HOLDER LEVER TENSION
25	ML-390768J4	TENSION BAND PART
26	ZG-395470J	SP PULL TENSION (2)
27	MZ-395471J3	TENSION BRAKE PART
28	ZS-464703	BID20X04STL CMT
30	ZW-332843	RETAINING RING GRIP 380STL ACP
31	ML-387431J1	SLIDER PINCH PART
32	ML-387277J4	ARM REVIEW PART
33	ZG-387282J	SP TORSION REVIEW
34	ZW-401776J	NUT REVIEW
35	BV-V1102A070A	LEADER S BLK 425EA
36	BV-V1102A080A	LEADER T BLK 425EA
37	VT-387394J1	GUIDE ROLLER D8 PART
38	ZS-374458	6SET20X030SCM PKR FP
39	ML-387428J	SLIDER FRONT LOADING
40	MZ-387335J	GEAR EJECT
41	ML-391745J3	ARM DAMPER
42	ZG-395567J	SP TORSION ARM DAMPER
43	BL-V1102A140A	ARM LOADING BLK 425EA
44	ZG-387417J	SP TORSION LOAD (S)
45	ZG-387418J	SP TORSION LOAD (T)
46	ZG-392831J	SP TORSION JOINT (2)
47	ML-387350J1	ARM LID OPENER
48	BV-V1102A150A	CASSETTE LOAD BLK 425EA
49	ZG-387348J1	SP PLATE HOLDER
50	ZG-387421J	SP TORSION DAMPER (S)
51	ML-387345J	LEVER DAMPER (S)
52	ZG-388290J1	SP TORSION DAMPER (T)
53	ML-387346J	(LEVER DAMPER (T))
54	ML-387344J	LEVER LOCK RELEASE
55	ZG-387420J1	SP TORSION RELEASE
56	ML-387349J2	ARM SHUTTER
57	SE-395554J1	GUIDE FRONT (2)
58	MZ-406134J	PLATE UPPER (2)
59	ZS-358936	ST BID30X06STL CMT
62	MZ-404995J	GEAR MID PART
63	ZS-321194	ST PAN26X05STL CMT
64	MP-404852J	PINCH ROLLER (2) PART
70	BB-V1130A020J	MECHA DECK BLK G51EA

NOTE:

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4. MECHA BLOCK (2)

Ref. No.	Part No.	Description
1	ML-404567J1	SLIDER BRAKE (3) PART
2	ML-404944J	SLIDER TRIGGER (2)
3	ML-387402J1	LEVER TRIGGER
4	ZG-387468J	SP PULL SLIDER
5	ZG-387403J	SP TORSION COUPLING
6	ZW-389923J	PW26X060X050PSL
7	MZ-404577J	DISK CLUTCH (2) PART
8	ZW-387492J	SLIT W21X040X050PSL
9	BM-400682J3	MOTOR DFX-67B3VWB2 [CAPSTAN MOTOR]
10	ZS-365149	PT BID26X06STL CMT
11	MB-407117J	BELT CAPSTAN (3)
12	EA-404543J	PC (#) SENSOR (2) KFX
13	ED-390011J	D LED GL451 INFRARED [D1]
14	ET-403420J	DETECTOR SG-105LF [PH1][PH2]
15	EJ-387497J	SOCKET HOUSING 5062-30-10-13 [PS1]
16	EJ-381837J	SOCKET 174074-5 5P [P1]
17	ES-387465J	SW MODE SELECT MMS00070ZLBO [SW1]
19	ET-390009J	TR PHOTO PT493F [TR4]
20	EW-389313J	CORD FFC P1.25 L=120 13P [WP1]
21	MZ-387430J	HOLDER D-LED
22	MZ-387445J	HOLDER S SENSOR
23	MZ-404542J	HOLDER PHOTO SENSOR (2)
24	ET-361490	TR PHOTO PN268 [TR1]
25	MZ-V1102A090A	GEAR TOGGLE (S) BLK 425EA
26	MZ-V1102A100A	GEAR TOGGLE (T) BLK 425EA
27	ZG-387413J1	SP PULL TOGGLE
28	MZ-387332J	GEAR WORM WHEEL
29	MZ-404538J	GEAR CAM SLIDER (3)
30	MZ-387333J1	GEAR FRONT LOADING
31	BM-387503J	MOTOR PART [LOADING MOTOR]
32	MZ-409537J	GEAR WORM (2) PART
33	MR-391968J	PULLEY TRIGGER (2)
34	ZG-387443J	SP TRIGGER
35	MR-387406J	HOLDER THRUST WORM
36	ZS-425981	BID30X03STL CMT
37	BL-387458J2	CAPSTAN BRAKE PART
38	ZG-387502J	SP PULL CAPSTAN BRAKE
39	ES-373099	SW LEAF MTS10110MPC1
40	ZS-389950J	PT BID26X10STL CMT
41	ZS-358936	ST BID30X06STL CMT
42	ML-387311J2	ARM COUPLING
43	ES-408470J	SW MICRO HXW0593-01-100 01-1 [S-SW]

NOTE:

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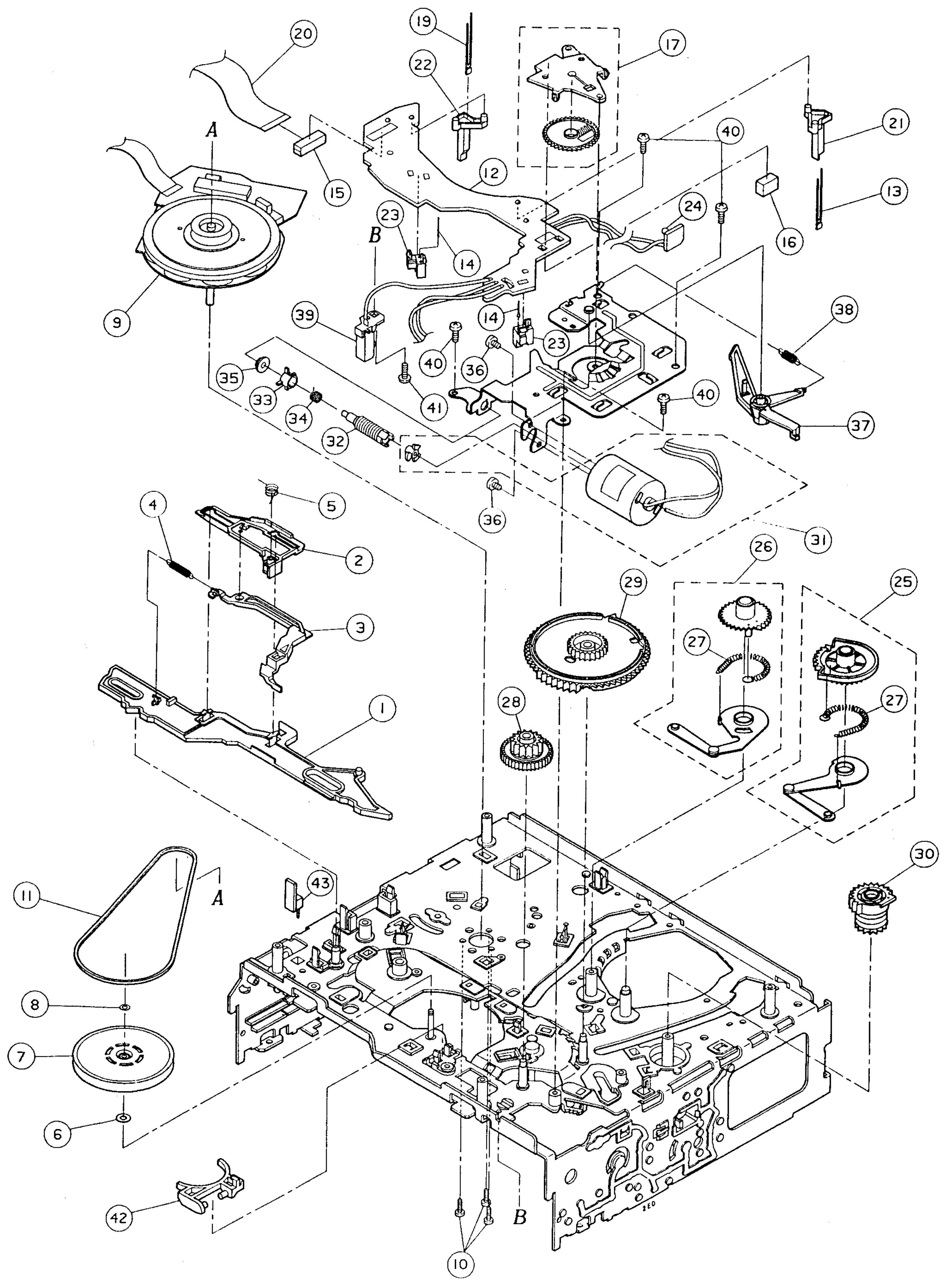
MECHA BLOCK (2)



5. P.C BOARD BLK

Ref. No.	Part No.	Description
1-A	BA-V1170A600A	PC (#) MAIN (PAL) BLK G51EA [EA]
1-B	BA-V1170A600C	PC (#) MAIN (PAL) BLK G51EM [EM]
1-C	BA-V1170A600B	PC (#) MAIN (PAL) BLK G51EDG [EDG]
1-D	BA-V1170Q600D	PC (#) MAIN (PAL) BLK G51EO [EO]
1-E	BA-V1170Q600G	FRPC (#) MAIN (PAL) BLK G55EOG-V [EOG-V]
1-F	BA-V1170Q600E	FRPC (#) MAIN (PAL) BLK G51EOH (E) [EOH]
1-G	BA-V1170A600F	PC (#) MAIN (PAL) BLK G51EOH (Y1) [EOH (Y1)]
1-H	BA-V1170Q600H	FRPC (#) MAIN (PAL) BLK G54EOH-V [EOH-V]
2-A	BA-V1166A610F	PC PRE AMP PAL BLK G51EA [EA]
2-B	BA-V1166A610G	PC PRE AMP PAL BLK G51EM [EM/EOH (Y1)]
2-C	BA-V1166A610H	PC PRE AMP PAL BLK G51E0 [EDG/EO/EOG-V/EOH/EOH-V]
3-A	BA-V1170A630A	PC (#) OPERATION (E) BLK G51EA [EA]
3-B	BA-V1170A630C	PC (#) OPERATION (E) BLK G51EM [EM]
3-C	BA-V1170A630B	PC (#) OPERATION (E) BLK G51EDG [EDG]
3-D	BA-V1170Q630D	PC (#) OPERATION (E) BLK G51EO [EO]
3-E	BA-V1170Q630G	FRPC (#) OPERATION (E) BLK G55EOG-V [EOG-V]
3-F	BA-V1170Q630E	FRPC (#) OPERATION (E) BLK G51EOH (E) [EOH]
3-G	BA-V1170A630F	PC (#) OPERATION (E) BLK G51EOH (Y1) [EOH (Y1)]
3-H	BA-V1170Q630H	FRPC (#) OPERATION (E) BLK G54EOH-V [EOH-V]
4-A	BA-V1164A500A	PC POWER BLK G30EA [EA]
4-B	BA-V1130A510A	PC (#) POWER EM BLK F220EM [EM]
4-C	BA-V1164A500C	PC POWER BLK G20EDG [EDG]
4-D	BA-V1166A500A	PC (#) POWER EO BLK G20EO [EO]
4-E	BA-V1161Q500B	PC (#) POWER EGN BLK G25EOG-V [EOG-V]
4-F	BA-V1161A500C	PC (#) POWER EGN BLK G22SEG [EOH/EOH-V]

PC (#) MAIN BLK CONSISTS OF FOLLOWING P.C BOARDS.
- MAIN (A) P.C BOARD
- MAIN (B) P.C BOARD

PC (#) OPERATION BLK CONSISTS OF FOLLOWING P.C BOARDS.
- OPERATION P.C BOARD
- PIN JACK P.C BOARD

PC (#) POWER EO BLK CONSISTS OF FOLLOWING P.C BOARDS.
- POWER SUPPLY P.C BOARD
- DIODE P.C BOARD

PC (#) POWER EM BLK CONSISTS OF FOLLOWING P.C BOARDS.
- POWER SUPPLY (1) P.C BOARD
- POWER SUPPLY (2) P.C BOARD
- DIODE P.C BOARD

PC (#) POWER EGN BLK CONSISTS OF FOLLOWING P.C BOARDS.
- POWER SUPPLY (1) P.C BOARD
- POWER SUPPLY (2) P.C BOARD

6. MAIN (A) P.C BOARD

Ref. No.	Part No.	Description
C369	*EC-391843J	C DOUBLE FYD0H223Z 5.5DC
D1	ED-307572	D SILICON H 1SS131
D2	ED-307572	D SILICON H 1SS131
D3	ED-307572	D SILICON H 1SS131
D4	ED-307572	D SILICON H 1SS131
D6	ED-403731J	D ZENER H UTZJ8.2C [EOH/EOG-V/EOH-V]
D7	ED-307572	D SILICON H 1SS131 [EOH/EOG-V/EOH-V]
D8	ED-387919J	D ZENER H HZS6A1L
D9	ED-307572	D SILICON H 1SS131 [EO/EOG-V]
D10	ED-307572	D SILICON H 1SS131 [EO/EOG-V]
D12	ED-405603J	D ZENER H MTZJ10B T26 [EXCEPT EA/EDG/EM]
D13	ED-405604J	D ZENER H MTZJ4.3C T26 [EXCEPT EA/EDG/EM]
D50	ED-307572	D SILICON H 1SS131 [EOH/EOG-V/EOH-V]
D102	ED-404170J	D ZENER H MTZJ2.0A T26 [EOH/EOG-V/EOH-V]
D201	ED-307572	D SILICON H 1SS131
D202	ED-307572	D SILICON H 1SS131
D203	ED-307572	D SILICON H 1SS131
D204	ED-397233J	D ZENER H HZS5C3
D205	ED-403267J	D ZENER H MTZJ3.3B T26
D206	ED-307572	D SILICON H 1SS131 [EOG-V]
D207	ED-307572	D SILICON H 1SS131 [EOG-V]
D208	ED-307572	D SILICON H 1SS131
D209	ED-307572	D SILICON H 1SS131
D210	ED-403726J	D ZENER H UTZJ30B [EOG-V]
D211	ED-403730J	D ZENER H UTZJ6.2A [EOG-V]
D212	ED-511907	D SILICON 1N4002 100/1.0A
D213	ED-511907	D SILICON 1N4002 100/1.0A
D301	ED-307572	D SILICON H 1SS131
D302	ED-307572	D SILICON H 1SS131
D303	ED-404086J	D ZENER H UTZJ7.5C
D304	ED-403724J	D ZENER H UTZJ10A
D305	ED-307572	D SILICON H 1SS131
D306	ED-307572	D SILICON H 1SS131
D307	ED-307572	D SILICON H 1SS131
D308	ED-307572	D SILICON H 1SS131
D309	ED-307572	D SILICON H 1SS131
D310	ED-307572	D SILICON H 1SS131
D401	ED-307572	D SILICON H 1SS131
D402	ED-307572	D SILICON H 1SS131
D403	ED-307572	D SILICON H 1SS131 [EM/EOH (Y1)]
D405	ED-307572	D SILICON H 1SS131
D406	ED-366443	D SILICON H MA700FA5 F10
D408	ED-307572	D SILICON H 1SS131
D412	ED-403729J	D ZENER H UTZJ5.6C
D501	ED-307572	D SILICON H 1SS131 [EXCEPT EA]
D502	ED-307572	D SILICON H 1SS131
D503	ED-307572	D SILICON H 1SS131
D504	ED-307572	D SILICON H 1SS131
D505	ED-307572	D SILICON H 1SS131
D506	ED-307572	D SILICON H 1SS131
D507	ED-307572	D SILICON H 1SS131
D508	ED-307572	D SILICON H 1SS131 [EXCEPT EA]
D509	ED-307572	D SILICON H 1SS131
DL500	EH-416491J	DL EFDJLA13A
DL501	EH-394838J	DL ADL-FN1344Q [EM/EOH (Y1)]
FL1	EH-394684J	FILTER EMI ZBF503D-00TA T05 [EOG-V]
FR201	*ER-400959J	R FUSE V T05 ERD2FCV 1/4W1200G
FR202	*ER-404093J	R FUSE V T05 RF25SCVTP1/4WR56K [EXCEPT EA/EDG/EM]
FR350	*ER-400729J	R FUSE V T05 RF25SCVTP1/4WR47K
FR501	*ER-404093J	R FUSE V T05 RF25SCVTP1/4WR56K

Ref. No.	Part No.	Description
IC1	EI-389622J	IC L5631
IC101	EI-310036	IC TC4066BP
IC102	EI-394861J	IC LVA521S-2 [EOH/EOG-V/EOH-V]
IC103	EI-403964J	IC NJM2245L [EOH/EOG-V/EOH-V]
IC201	EI-400756J	IC NJM4558L-B
IC301	EI-414824J	IC MN675201A-XDT QFXSYP1
IC302	EI-353421	IC BA6229
IC303	EI-373980	IC BA15218N
IC304	EI-360586	IC LA6358S
IC400	EI-403234J1	IC LA7391A
IC401	EI-394856J	IC LC8992
IC402	EI-373981J1	IC BA10393N
IC403	EI-356457	IC BU4013B
L1	EO-373260	COIL FIX 1 LAP02 F05 1R0K [EA/EDG]
L101	EO-345881	COIL FIX 1 EL0606SKI 101J
L103	EO-356722	COIL FIX 1 LAP02 F05 6R8K
L301	EO-381196J	COIL FIX 1 EL0405SKI 470K
L302	EO-345881	COIL FIX 1 EL0606SKI 101J
L303	EO-354600	COIL FIX 1 LAP02 F05 101K
L402	EO-357508	COIL FIX 1 LAP02 F05 151K
L403	EO-381192J	COIL FIX 1 EL0405SKI 270K
L404	EO-345880	COIL FIX 1 EL0606SKI 820J
L405	EO-354600	COIL FIX 1 LAP02 F05 101K
L406	EO-354600	COIL FIX 1 LAP02 F05 101K
L410	EO-345874	COIL FIX 1 EL0606SKI 330J
L450	EO-373260	COIL FIX 1 LAP02 F05 1R0K [EOG-V]
L470	EO-356722	COIL FIX 1 LAP02 F05 6R8K
L472	EO-345880	COIL FIX 1 EL0606SKI 820J
L474	EO-388161J	COIL FIX 1 EL0405SKI 560K
L480	EO-403937J	COIL FIX 1 EL0405RA T05 4R7J [EOG-V]
L500	EO-345880	COIL FIX 1 EL0606SKI 820J
L501	EO-353900	COIL FIX 1 LAP02 F05 150K
L502	EO-345880	COIL FIX 1 EL0606SKI 820J [EM/EOH (Y1)]
L503	EO-353900	COIL FIX 1 LAP02 F05 150K [EM/EOH (Y1)]
L504	EO-353900	COIL FIX 1 LAP02 F05 150K [EM/EOH (Y1)]
L505	EO-345880	COIL FIX 1 EL0606SKI 820J
L507	EO-392817J	COIL FIX 1 EL0405SKI 1R2K
L508	EO-403937J	COIL FIX 1 EL0405RA T05 4R7J
L509	EO-345880	COIL FIX 1 EL0606SKI 820J
L510	EO-403270J	COIL FIX 1 EL0405RA T05 101J
L511	EO-381195J	COIL FIX 1 EL0405SKI 331K
L512	EO-381197J	COIL FIX 1 EL0405SKI 471K
L570	EO-345880	COIL FIX 1 EL0606SKI 820J
L590	EO-387802J	COIL FIX 1 EL0405SKI 330K [EM/EOH (Y1)]
MD1-A	BV-387610J1	RF CONVERTER YAA21-0809G EA [EA]
MD1-B	BV-403408J	RF CONVERTER MDLK6E753A EDG [EDG]
MD1-C	BV-387611J1	RF CONVERTER YAA21-0808G EV [EM]
MD1-D	BV-403409J	RF CONVERTER MDLK6D755A EO [EXCEPT EA/EDG/EM]
P303	EJ-388345J	SOCKET HLEM13S-1 13P
P304	EJ-388346J	SOCKET HLEM15S-1 15P
P400	EJ-388345J	SOCKET HLEM13S-1 13P
P401	EJ-403407J	SOCKET HLEM18S-1 18P
PJ101-A	EJ-387614J	PIN J T6353-ABCB YL BK 4P [EA/EDG/EM]
PJ101-B	EJ-405226J	PIN JACK T6572-ABBB YLW.RED 2P [EOH/EOG-V/EOH-V]
PJ102	EJ-387613J	SOCKET M1812 21P [EXCEPT EA/EDG/EM]
PJ103	EJ-405225J	PIN J JPJ1018-01-030 WHITE 1P [EOH/EOG-V/EOH-V]
R214	*ER-403405J	R OMF H S12 FS 1W R75J
TR1	ET-353899	TR 2SA1317 S,T,U
TR2	ET-414816J	TR 2SC2668 Y T05
TR3	ET-353899	TR 2SA1317 S,T,U
TR4	ET-353899	TR 2SA1317 S,T,U
TR5	ET-353899	TR 2SA1317 S,T,U
TR7	ET-353899	TR 2SA1317 S,T,U
TR8	ET-354414	TR DTC144ES
TR9	ET-354414	TR DTC144ES
TR11	ET-353899	TR 2SA1317 S,T,U
TR12	ET-397160J	TR 2SC3330 R,S,T,U,V
TR13	ET-353899	TR 2SA1317 S,T,U [EA/EDG/EM/EO]
TR14	ET-370310	TR DTC144TS [EOH/EOG-V/EOH-V]
TR15	ET-353897	TR DTC114ES
TR16	ET-397160J	TR 2SC3330 R,S,T,U,V [EOH/EOG-V/EOH-V]
TR17	ET-397160J	TR 2SC3330 R,S,T,U,V
TR18	ET-397160J	TR 2SC3330 R,S,T,U,V
TR19	ET-354414	TR DTC144ES [EXCEPT EDG]
TR20	ET-405622J	TR 2SD2061 E,F [EXCEPT EA/EDG/EM]
TR101	ET-354414	TR DTC144ES
TR102	ET-356336	TR DTA114ES
TR103	ET-354414	TR DTC144ES
TR104	ET-353899	TR 2SA1317 S,T,U
TR105	ET-353899	TR 2SA1317 S,T,U
TR107	ET-397160J	TR 2SC3330 R,S,T,U,V
TR108	ET-356336	TR DTA114ES [EXCEPT EA/EDG/EM]
TR109	ET-397160J	TR 2SC3330 R,S,T,U,V
TR110	ET-353899	TR 2SA1317 S,T,U [EOH/EOG-V/EOH-V]
TR201	ET-366168	TR 2SD1292 Q,R [EOG-V]
TR202	ET-356336	TR DTA114ES
TR203	ET-397160J	TR 2SC3330 R,S,T,U,V
TR205	ET-388338J	TR 2SB1425 S,E
TR209	ET-354414	TR DTC144ES [EOG-V]
TR210	ET-405622J	TR 2SD2061 E,F
TR211	ET-356336	TR DTA114ES [EOG-V]
TR301	ET-354414	TR DTC144ES
TR302	ET-397160J	TR 2SC3330 R,S,T,U,V
TR303	ET-363953	TR DTA114TS [EM/EOH (Y1)]
TR304	ET-354415	TR DTA144ES
TR305	ET-354414	TR DTC144ES
TR306	ET-354414	TR DTC144ES
TR307	ET-373985	TR DTA144TS
TR308	ET-373985	TR DTA144TS
TR309	ET-373985	TR DTA144TS
TR310	ET-354414	TR DTC144ES
TR313	ET-354414	TR DTC144ES
TR401	ET-356336	TR DTA114ES
TR402	ET-354414	TR DTC144ES
TR404	ET-354364	TR DTC143TS
TR406	ET-397160J	TR 2SC3330 R,S,T,U,V
TR407	ET-353899	TR 2SA1317 S,T,U
TR408	ET-354414	TR DTC144ES
TR409	ET-360399	TR DTC114TS
TR410	ET-354414	TR DTC144ES
TR411	ET-360399	TR DTC114TS
TR413	ET-354415	TR DTA144ES
TR414	ET-388338J	TR 2SB1425 S,E
TR415	ET-353899	TR 2SA1317 S,T,U
TR417	ET-360399	TR DTC114TS
TR421	ET-364040	TR UN421D
TR423	ET-356336	TR DTA114ES
TR424	ET-388338J	TR 2SB1425 S,E
TR425	ET-354414	TR DTC144ES [EM/EOH (Y1)]
TR470	ET-353899	TR 2SA1317 S,T,U
TR471	ET-353899	TR 2SA1317 S,T,U
TR501	ET-353897	TR DTC114ES
TR502	ET-360646	TR DTA143ES [EM/EOH (Y1)]
TR503	ET-397160J	TR 2SC3330 R,S,T,U,V
TR504	ET-397160J	TR 2SC3330 R,S,T,U,V [EM/EOH (Y1)]
TR505	ET-397160J	TR 2SC3330 R,S,T,U,V [EM/EOH (Y1)]
TR506	ET-397160J	TR 2SC3330 R,S,T,U,V
TR507	ET-397160J	TR 2SC3330 R,S,T,U,V
TR508	ET-356336	TR DTA114ES
TR509	ET-397160J	TR 2SC3330 R,S,T,U,V
TR510	ET-397160J	TR 2SC3330 R,S,T,U,V
TR511	ET-397160J	TR 2SC3330 R,S,T,U,V

Ref. No.	Part No.	Description
TR512	ET-397160J	TR 2SC3330 R,S,T,U,V
TR513	ET-356336	TR DTA114ES [EXCEPT EA]
TR514	ET-354414	TR DTC144ES [EXCEPT EA]
TR515	ET-397160J	TR 2SC3330 R,S,T,U,V
TR570	ET-397160J	TR 2SC3330 R,S,T,U,V
TR571	ET-397160J	TR 2SC3330 R,S,T,U,V
TR572	ET-354414	TR DTC144ES
TR573	ET-354414	TR DTC144ES
VR301	EV-397066J	R S-FIX H T05EVNDXAA03 0.1W333
VR401	EV-389476J	R S-FIX H T05EVNDXAA03 0.1W103
VR402	EV-389489J	R S-FIX H T05EVNDXAA03 0.1W472
VR403	EV-389482J	R S-FIX H T05EVNDXAA03 0.1W682
VR404	EV-397066J	R S-FIX H T05EVNDXAA03 0.1W333
WF201	EW-404138J1	CORD KX MA-POW L=225 12P
X301	EI-389640N	OSC X'TAL HC-49/U 8000KHZ
X500	EI-381632J	OSC X'TAL 86686 4.433619MHZ
IF1-A	BV-403236J1	VIF UNIT KX EA [EA]
IF1-B	BV-412399J	VIF UNIT KX-38.9 EDG [EDG]
IF1-C	BV-403239J1	VIF UNIT KX EM [EM]
IF1-D	BV-403241J1	VIF UNIT KX EOG [EO]
IF1-E	BV-403240J1	VIF UNIT KX EOH [EOH/EOH-V]
IF1-F	BV-416729J	VIF UNIT KX-TEK EOG [EOG-V]
TU1-A	EE-408417J	TV TUNER VTSS6AZV EA [EA]
TU1-B	EE-387603J1	TV TUNER TERE1-019B EO [EDG]
TU1-C	EE-405638J	TV TUNER VTSS6CZ EM [EM]
TU1-D	EE-387604J3	TV TUNER TERE1-007D EOG [EO]
TU1-E	EE-412395J	TV TUNER ENV-578C9F1 EOH [EOH/EOH-V]
TU1-F	EE-416524J	TV TUNER TEKE4-034 EOG [EOG-V]
1-A	SP-388307J	PANEL REAR JACK EA [EA/EM]
1-B	SP-395563J	PANEL REAR JACK EDG (2) [EDG]
1-C	SP-387357J	PANEL REAR JACK EK [EO]
1-D	SP-404784J	PANEL REAR JACK EK (B) [EOH/EOH-V]
1-E	SP-412377J	PANEL REAR JACK EOG (D) [EOG-V]

7. MAIN (B) P.C BOARD

Ref. No.	Part No.	Description
D601	ED-307572	D SILICON H 1SS131
D603	ED-307572	D SILICON H 1SS131 [EXCEPT EA]
D801	ED-307572	D SILICON H 1SS131
D901	ED-307572	D SILICON H 1SS131
D902	ED-307572	D SILICON H 1SS131
FL701	EH-366894	FILTER CE SFE-4.16MB 4.16MHZ [EDG/EM/EOG-V]
FL801	EO-408440J	COIL OSC 1 125-8020-41 70.0KHZ
IC601	EI-405722J	IC UPD6450CX-515
IC602	EI-403469J	IC MM1068XS
IC701	EI-366892	IC BA7025L [EDG/EM/EOG-V]
IC702	EI-200573	IC TC4053BP [EM/EOH (Y1)]
IC801	EI-388360J	IC BA7765AS
IC901	EI-386468J	IC BA3308
IC902	EI-310036	IC TC4066BP
L601	EO-345881	COIL FIX 1 EL0606SKI 101J
L602	EO-345876	COIL FIX 1 EL0606SKI 470J
L603	EO-351866	COIL FIX 1 LAP02 F05 330K [EXCEPT EA]
L604	EO-351866	COIL FIX 1 LAP02 F05 330K
L605	EO-345881	COIL FIX 1 EL0606SKI 101J
L701	EO-345881	COIL FIX 1 EL0606SKI 101J [EDG/EM/EOH (Y1)/EOG-V]
L702	EO-345881	COIL FIX 1 EL0606SKI 101J [EM/EOH (Y1)]
L703	EO-368129	COIL FIX 1 TL-8 153J [EDG/EM/EOG-V]
L801	EO-390717J	COIL FIX 1 LHL06TB T05 103J
L802	EO-390716J	COIL FIX 1 LHL06TB T05 272J
L901	EO-345881	COIL FIX 1 EL0606SKI 101J
TR601	ET-353899	TR 2SA1317 S,T,U
TR602	ET-354414	TR DTC144ES
TR603	ET-397160J	TR 2SC3330 R,S,T,U,V
TR604	ET-397160J	TR 2SC3330 R,S,T,U,V [EXCEPT EA]
TR605	ET-356336	TR DTA114ES [EXCEPT EA]
TR606	ET-356336	TR DTA114ES [EXCEPT EA]
TR607	ET-353899	TR 2SA1317 S,T,U
TR608	ET-353899	TR 2SA1317 S,T,U
TR609	ET-354414	TR DTC144ES [EXCEPT EA]
TR701	ET-397160J	TR 2SC3330 R,S,T,U,V [EDG/EM/EOH (Y1)/EOG-V]
TR702	ET-397160J	TR 2SC3330 R,S,T,U,V [EDG/EM/EOG-V]
TR751	ET-397160J	TR 2SC3330 R,S,T,U,V [EM/EOH (Y1)]
TR752	ET-397160J	TR 2SC3330 R,S,T,U,V [EM/EOH (Y1)]
TR753	ET-397160J	TR 2SC3330 R,S,T,U,V [EM/EOH (Y1)]
TR754	ET-397160J	TR 2SC3330 R,S,T,U,V [EM/EOH (Y1)]
TR801	ET-397160J	TR 2SC3330 R,S,T,U,V
TR803	ET-354414	TR DTC144ES [EM/EOH (Y1)]
TR901	ET-354414	TR DTC144ES
TR902	ET-354414	TR DTC144ES
TR903	ET-397160J	TR 2SC3330 R,S,T,U,V
TR904	ET-353899	TR 2SA1317 S,T,U
VC601	EC-412084J	C S-FIX H T05 TZ03R 5.2-30
VR801	EV-403967J	R S-FIX V T05EVNDCAA03 0.1W332
VR802	EV-405263J	R S-FIX V T05EVNDCAA03 0.1W104
X601	EI-389974J	OSC X'TAL HC-49/U 17.734475MHZ
X602	EI-403467J	OSC CE CSB500F40 15.680KHZ

8. PRE AMP P.C BOARD

Ref. No.	Part No.	Description
D1	ED-307572	D SILICON H 1SS131
D2	ED-307572	D SILICON H 1SS131
D3	ED-307572	D SILICON H 1SS131
D4	ED-307572	D SILICON H 1SS131
FL101	EO-414852J	COIL OSC 1 125-8045-31 70.0KHZ
IC1	EI-414860J	IC BA7279S
L1	EO-354600	COIL FIX 1 LAP02 F05 101K
L2	EO-353901	COIL FIX 1 LAP02 F05 560K
L4	EO-360555	COIL FIX 1 LAP02 F05 180K
L5	EO-353900	COIL FIX 1 LAP02 F05 150K
L6	EO-381193J	COIL FIX 1 EL0405SKI 271K
L7	EO-351869	COIL FIX 1 LAP02 F05 820K
L9	EO-414830J	COIL FIX 1 LAP02 T26 220J
L12	EO-414833J	COIL FIX 1 LAP02 T26 8R2J
L13	EO-381195J	COIL FIX 1 EL0405SKI 331K
L14-A	EO-414829J	COIL FIX 1 LAP02 T26 181J [EA]
L14-B	EO-357508	COIL FIX 1 LAP02 F05 151K [EXCEPT EA]
L15	EO-414831J	COIL FIX 1 LAP02 T26 680J
L16	EO-354600	COIL FIX 1 LAP02 F05 101K
L30	EO-351869	COIL FIX 1 LAP02 F05 820K
L101	EO-390716J	COIL FIX 1 LHL06TB T05 272J
P3	EJ-403407J	SOCKET HLEM18S-1 18P
TH1	EX-405691J	THERMISTOR NTH5D332KA
TR1	ET-353899	TR 2SA1317 S,T,U
TR2	ET-397160J	TR 2SC3330 R,S,T,U,V
TR3	ET-360399	TR DTC114TS [EM/EOH (Y1)]
TR4	ET-360399	TR DTC114TS
TR5	ET-364040	TR UN421D
TR6	ET-354414	TR DTC144ES [EXCEPT EA]
TR7	ET-397160J	TR 2SC3330 R,S,T,U,V
TR8	ET-397160J	TR 2SC3330 R,S,T,U,V
TR9	ET-397160J	TR 2SC3330 R,S,T,U,V
TR10	ET-353897	TR DTC114ES
TR11	ET-353899	TR 2SA1317 S,T,U
TR12	ET-353899	TR 2SA1317 S,T,U
TR13	ET-364040	TR UN421D
TR14	ET-397160J	TR 2SC3330 R,S,T,U,V
TR15	ET-354364	TR DTC143TS [EXCEPT EA]
TR16	ET-354414	TR DTC144ES
TR17	ET-364040	TR UN421D
TR18	ET-353897	TR DTC114ES
TR19	ET-354414	TR DTC144ES
TR21	ET-397160J	TR 2SC3330 R,S,T,U,V
TR22	ET-360399	TR DTC114TS
TR23	ET-354414	TR DTC144ES
TR101	ET-397160J	TR 2SC3330 R,S,T,U,V
VR1	EV-403988J	R S-FIX V T05EVNDCAA03 0.1W102
VR2	EV-403988J	R S-FIX V T05EVNDCAA03 0.1W102
VR3	EV-405248J	R S-FIX V T05EVNDCAA03 0.1W471
VR4	EV-405248J	R S-FIX V T05EVNDCAA03 0.1W471
1	EW-414862J	CORD FFC BD P1.25 L=230 18P

9. OPERATION P.C BOARD

Ref. No.	Part No.	Description
D1	ED-307572	D SILICON H 1SS131 [EDG/EM]
D2	ED-307572	D SILICON H 1SS131 [EM/EOG-V]
D3	ED-307572	D SILICON H 1SS131 [EA/EDG]
D4	ED-307572	D SILICON H 1SS131 [EO]
D5	ED-307572	D SILICON H 1SS131 [EM/EOH (Y1)]
D10	ED-307572	D SILICON H 1SS131 [EOH/EOG-V/EOH-V]
D11	ED-307572	D SILICON H 1SS131 [EOH/EOG-V/EOH-V]
D12	ED-403279J	D ZENER H UTZJ9.1B
D13	ED-403731J	D ZENER H UTZJ8.2C
D14	ED-307572	D SILICON H 1SS131
D15	ED-307572	D SILICON H 1SS131
D16	ED-307572	D SILICON H 1SS131
D17	ED-401099J	D SCHOTTKY MA719 T26 40/0.5A [EOG-V]
D18	ED-307572	D SILICON H 1SS131
D19	ED-307572	D SILICON H 1SS131
D20	ED-307572	D SILICON H 1SS131
D21	ED-307572	D SILICON H 1SS131
D22	ED-307572	D SILICON H 1SS131
D23	ED-307572	D SILICON H 1SS131
D24	ED-307572	D SILICON H 1SS131
D25	ED-307572	D SILICON H 1SS131
D26	ED-307572	D SILICON H 1SS131
D27	ED-307572	D SILICON H 1SS131
D28	ED-307572	D SILICON H 1SS131
D30	ED-307572	D SILICON H 1SS131
D31	ED-307572	D SILICON H 1SS131
D32	ED-307572	D SILICON H 1SS131
D33	ED-307572	D SILICON H 1SS131
FL1-A	EM-414778J	IND FL FV506GA CHARACTER [EXCEPT EOH/EOH-V]
FL1-B	EM-414777J	IND FL FV562GA CHARACTER [EOH/EOH-V]
IB1	EH-403945J	COMP R RGLE9X 103J
IB2	EH-383083J	COMP R RGLE3X 103J
IB3	EH-383056J	COMP R RGLE4X 103J [EOG-V/EOH-V]
IB4	EH-383119J	COMP R RGLE4X 473J [EOG-V/EOH-V]
IC1-A	EI-414819J	IC UPD75217CW-187 QFXOPP1 [EA/EDG/EM/EO]
IC1-B	EI-414820J	IC UPD75217CW-188 QFXOPD1 [EOH/EOH-V]
IC1-C	EI-416737J	IC UPD75217CW-195 QBXOPG1 [EOG-V]
IC2	EI-408393J	IC ST24C01B1
IC3	EI-373955	IC S-8053ALR
L1	EO-353587	COIL FIX 1 LAP02 F05 220K
L2	EO-353587	COIL FIX 1 LAP02 F05 220K
PH1	ET-411995J	DETECTOR GP1U581X
P2	EJ-397357J	SOCKET HLEM13R-1 13P
P3	EJ-414768J	SOCKET HLEM15R-1 15P
SW1	ES-349474	SW TACT SKHHAM004A
SW2	ES-349474	SW TACT SKHHAM004A
SW3	ES-349474	SW TACT SKHHAM004A
SW4	ES-349474	SW TACT SKHHAM004A
SW5	ES-349474	SW TACT SKHHAM004A
SW6	ES-349474	SW TACT SKHHAM004A
SW7	ES-349474	SW TACT SKHHAM004A
SW8	ES-349474	SW TACT SKHHAM004A
SW9	ES-349474	SW TACT SKHHAM004A
SW10	ES-349474	SW TACT SKHHAM004A
SW11	ES-349474	SW TACT SKHHAM004A
SW12	ES-349474	SW TACT SKHHAM004A
SW13	ES-349474	SW TACT SKHHAM004A
SW14	ES-349474	SW TACT SKHHAM004A
SW15	ES-349474	SW TACT SKHHAM004A [EXCEPT EDG]
SW16	ES-349474	SW TACT SKHHAM004A
SW17	ES-349474	SW TACT SKHHAM004A
SW18	ES-349474	SW TACT SKHHAM004A
SW19	ES-349474	SW TACT SKHHAM004A
SW20	ES-349474	SW TACT SKHHAM004A
SW21	ES-349474	SW TACT SKHHAM004A
TR1	ET-354414	TR DTC144ES
TR2	ET-354415	TR DTA144ES
X1	EI-367882J1	OSC CE FCR4.19MC3 4.190MHZ
X2	EI-368825M	OSC X'TAL C-002RX 32.768KHZ
1	EW-414866J	CORD FFC BD P1.25 L=130 13P
2	EW-414864J	CORD FFC BD P1.25 L=110 15P

10. PIN JACK P.C BOARD

Ref. No.	Part No.	Description
D34	ED-307572	D SILICON H 1SS131
D35	ED-307572	D SILICON H 1SS131
D36	ED-307572	D SILICON H 1SS131
D37	ED-307572	D SILICON H 1SS131
PJ1	EJ-387622J	PIN J JPJ5022-01-010 1P
PJ2	EJ-387623J	PIN J JPJ5022-01-040 1P
PJ3	EJ-408399J	PHONE J 2P YKB21-5165 3.5

11. VIF UNIT (EXCEPT EDG)

Ref. No.	Part No.	Description
CF1-A	EH-730625J	FILTER CE SAF38.9MZW70Z [EXCEPT EA]
CF1-B	EH-714626	FILTER SAW SAF36.9MZ70Z [EA]
CF2	EH-373920	FILTER CE SFE5.5MB
CF3-A	EH-368948	FILTER CE TPS5.5MW 5.5000MHZ [EXCEPT EM]
CF3-B	EH-729986J	FILTER CE TPS5.5MB2 [EM]
IC1	EI-368809	IC M51496P
L1	EO-387800J	COIL FIX 1 EL0405SKI 2R7K
L3	EH-733514J	COIL SIF DET 6F16437A1
L4-A	EO-732832J	COIL AFT 6F16435A1 [EXCEPT EA]
L4-B	EH-733515J	COIL AFT 6F16436A2 [EA]
L5-A	EO-732833J	COIL TANK 7KL 6F16436A1 [EXCEPT EA]
L5-B	EH-733516J	COIL TANK 6F16441A1 [EA]
L6	EO-387799J	COIL FIX 1 EL0405SKI 180K
L7	EO-387799J	COIL FIX 1 EL0405SKI 180K
L8	EO-387802J	COIL FIX 1 EL0405SKI 330K
L51	EO-725964J	COIL TRAP 6F16222A1 [EO/EOG-V]
L52	EO-725965J	COIL TRAP 6F16223A1 [EO/EOG-V]
Q1	ET-725820J	TR CHIP 2SC2735J
Q2	ET-713614	TR CHIP 2SA1235 E,F
Q51	ET-724885J	TR CHIP RT1N141C [EO/EOG-V]
Q52	ET-724885J	TR CHIP RT1N141C [EO/EOG-V]
VR2	EV-396023J	R S-FIX H T05EVNDXAA03 0.1W222
VR51	EV-389479J	R S-FIX H T05EVNDXAA03 0.1W223
VR52	EV-389479J	R S-FIX H T05EVNDXAA03 0.1W223 [EO/EOG-V]

12. VIF UNIT (EDG)

Ref. No.	Part No.	Description
CF1	EH-394874J	FILTER CE SAF38.9MZA70Z
CF2	EH-376338	FILTER CE TPS6.5MB
CF3	EH-368948	FILTER CE TPS5.5MW 5.5000MHZ
CF4	EH-373918	FILTER CE TPS5.5MB
CF51	EH-412432J	FILTER CE SFSH6.5MDB 6.500MHZ
CF52	EH-368827	FILTER CE SFS5.5MD 5.500MHZ
CF53	EH-373921	FILTER CE SFE6.0MB
IC1	EI-368809	IC M51496P
L1	EO-387782J	COIL FIX 1 EL0405SKI 2R2K
L2	EO-732831J	COIL SIF DET 6F16437A2
L3	EO-732832J	COIL AFT 6F16435A1
L4	EO-732833J	COIL TANK 7KL 6F16436A1
L5	EO-397238J	COIL FIX 1 EL0405SKI 6R8K
L6	EO-387798J	COIL FIX 1 EL0405SKI 150K
L51	EO-396361J	COIL FIX 1 EL0405SKI 8R2K
L52	EO-387803J	COIL FIX 1 EL0405SKI 221K
Q1	ET-725820J	TR CHIP 2SC2735J
Q2	ET-713614	TR CHIP 2SA1235 E,F
Q3	ET-370819	TR.CHIP 2SC3052
Q4	ET-713614	TR CHIP 2SA1235 E,F
Q51	ET-370819	TR.CHIP 2SC3052
Q52	ET-370819	TR.CHIP 2SC3052
VR1	EV-389479J	R S-FIX H T05EVNDXAA03 0.1W223
VR2	EV-396023J	R S-FIX H T05EVNDXAA03 0.1W222
X51	EI-368829	OSC CE CSB512P

13. POWER SUPPLY P.C BOARD (EA/EDG/EO)

Ref. No.	Part No.	Description
C1	EC-414869J	C EC V CUT GXB12 222M 25.0DC
C2	EC-411667J	C EC V CUT GXB16 472M 16.0DC
C3	EC-414870J	C EC V CUT GXB16 222M 35.0DC
C4	EC-414878J	C EC V CUT LLA 470M 100.0DC
C5	EC-414878J	C EC V CUT LLA 470M 100.0DC
D1	*ED-511907	D SILICON 1N4002 100/1.0A
D2	*ED-511907	D SILICON 1N4002 100/1.0A
D3	*ED-511907	D SILICON 1N4002 100/1.0A
D4	*ED-511907	D SILICON 1N4002 100/1.0A
D5	*ED-511907	D SILICON 1N4002 100/1.0A [EXCEPT EO]
D6	*ED-511907	D SILICON 1N4002 100/1.0A [EXCEPT EO]
D7	*ED-511907	D SILICON 1N4002 100/1.0A [EXCEPT EO]
D8	*ED-511907	D SILICON 1N4002 100/1.0A [EXCEPT EO]
D9	*ED-412107J	D SILICON 1N4003 T26 200/1.0A
D10	*ED-511907	D SILICON 1N4002 100/1.0A [EXCEPT EO]
D11	*ED-412107J	D SILICON 1N4003 T26 200/1.0A
D12	*ED-511907	D SILICON 1N4002 100/1.0A [EXCEPT EO]
D13	ED-397319J	D ZENER H HZS15-2
D14	ED-408912J	D ZENER H HZS36-3
D15	ED-402230J	D ZENER H HZS36-1
D17	*ED-511907	D SILICON 1N4002 100/1.0A [EXCEPT EO]
D18	*ED-511907	D SILICON 1N4002 100/1.0A [EXCEPT EO]
D19	ED-307572	D SILICON H 1SS131
D20	ED-307572	D SILICON H 1SS131
D21	ED-307572	D SILICON H 1SS131
D22-A	ED-402204J	D ZENER H HZS11A3 [EA/EDG]
D22-B	ED-396058J	D ZENER H HZS12B3 [EO]
D23	ED-403743J	D ZENER H HZS6B3
FR1	*ER-408375J	R FUSE V T05RF25SCPVTP1/4WR12K
FR2	*ER-400728J	R FUSE V T05 RF25SCVTP1/4WR12K
FR3	*ER-408375J	R FUSE V T05RF25SCPVTP1/4WR12K
FR4	*ER-328519	R FUSE H S10 ERD2FC 1/4W 68R0G
FR5	*ER-400605J	R FUSE V T05 ERD2FCV 1/4W15R0G
TR1	*ET-381175J	TR 2SD1856
TR2	*ET-408842J	TR 2SD2394 E,F
TR3	*ET-408842J	TR 2SD2394 E,F
TR4	*ET-411668J	TR 2SD2395 E,F
TR5	*ET-408841J	TR 2SB1565 E,F
TR6	ET-388338J	TR 2SB1425 S,E
TR7	ET-397160J	TR 2SC3330 R,S,T,U,V

14. DIODE P.C BOARD (EO)

Ref. No.	Part No.	Description
D24	*ED-379298	D SILICON DBA20B 100/2.0A

15. POWER SUPPLY (1) P.C BOARD (EM)

Ref. No.	Part No.	Description
C1	EC-408376J	C EC V CUT KMG 102M 50.0DC
C2	*EC-410530J	C EC V CUT KMG 332M 50.0DC
C3	EC-408426J	C EC V F05 LXF8 121M 50.0DC
C4	EC-403878J	C EC V T05 LXF8 271M 16.0DC
C14	EC-408426J	C EC V F05 LXF8 121M 50.0DC
C15	EC-403878J	C EC V T05 LXF8 271M 16.0DC
C20	EC-403371J	C EC V F05 LXF8 221M 25.0DC
C23	EC-404197J	C EC V T05 SXE8 330M 80.0DC
C24	EC-404197J	C EC V T05 SXE8 330M 80.0DC
C101	*EC-389414J	C CE V DE7090 B102K 400AC
D3	*ED-511907	D SILICON 1N4002 100/1.0A
D4	*ED-511907	D SILICON 1N4002 100/1.0A
D6	*ED-386226J	D SCHOTTKY RB100AT-32T26 40/1
D8	*ED-386226J	D SCHOTTKY RB100AT-32T26 40/1
D11	*ED-386226J	D SCHOTTKY RB100AT-32T26 40/1
D16	ED-307572	D SILICON H 1SS131
D17	*ED-412107J	D SILICON 1N4003 T26 200/1.0A
D18	*ED-412107J	D SILICON 1N4003 T26 200/1.0A
D19	ED-404032J	D ZENER H UTZJ39A
D20	ED-405524J	D ZENER H MTZJ36A T26
D27	ED-404387J	D ZENER H HZS16-1
D28	ED-391005J	D ZENER H HZS12B1
D54	ED-307572	D SILICON H 1SS131
D55	ED-307572	D SILICON H 1SS131
D57	ED-307572	D SILICON H 1SS131
D58	ED-405264J	D ZENER H UTZJ10C
D71	*ED-511907	D SILICON 1N4002 100/1.0A
D72	*ED-511907	D SILICON 1N4002 100/1.0A
D73	*ED-511907	D SILICON 1N4002 100/1.0A
D74	*ED-511907	D SILICON 1N4002 100/1.0A
D101	*ED-511907	D SILICON 1N4002 100/1.0A
D102	ED-403947J	D ZENER H UTZJ22C T26
D103	ED-307572	D SILICON H 1SS131
D104	ED-404031J	D ZENER H UTZJ11B T26
D106	ED-401046J	D SILICON RL104F-E T26 400/1A
D107	ED-403948J	D ZENER H UTZJ16C T26
D108	ED-405265J	D ZENER H UTZJ36C
D109	ED-405265J	D ZENER H UTZJ36C
F101	*EF-413079J	FUSE S505 T 250V 1.00A
FR1	*ER-400728J	R FUSE V T05 RF25SCVTP1/4WR12K
FR2	*ER-408375J	R FUSE V T05RF25SCPVTP1/4WR12K
FR3	*ER-400605J	R FUSE V T05 ERD2FCV 1/4W15R0G
FR4	*ER-400689J	R FUSE V T05 RF25SCVTP1/4WR68K
FR5	*ER-405441J	R FUSE V T05 RF25SCVTP1/4WR27K
FR102	*ER-401039J	R FUSE V T05 ERD2FCV 1/4W 4R7J
L1	EO-408381J	COIL FIX 2 C-5344-40 560K
L2	EO-408381J	COIL FIX 2 C-5344-40 560K
L3	EO-408381J	COIL FIX 2 C-5344-40 560K
L4	EO-408381J	COIL FIX 2 C-5344-40 560K
L6	EO-386541J	COIL FIX 1 ELF1010SKI 101K
L9	EO-410254J	COIL FIX 1 LHL06TB T05 681K
RL101	*EQ-400153J	RELAY POW AG2013 1TR 12V
TR1	*ET-366365	TR 2SB1185 E,F
TR5	*ET-366365	TR 2SB1185 E,F
TR6	*ET-356817	TR 2SB891 Q,R
TR9	*ET-366365	TR 2SB1185 E,F
TR12	*ET-405622J	TR 2SD2061 E,F
TR13	*ET-366365	TR 2SB1185 E,F
TR14	ET-360399	TR DTC114TS
TR15	ET-360399	TR DTC114TS
TR16	ET-397160J	TR 2SC3330 R,S,T,U,V
TR101	ET-389803J	TR 2SA933S R,S
TR102	ET-400218J	TR 2SC1740S R,S
TR103	ET-366168	TR 2SD1292 Q,R
TR104	ET-366365	TR 2SB1185 E,F
TR106	ET-389803J	TR 2SA933S R,S
TR107	*ET-404195J	TR 2SC4486 S,T T05

16. POWER SUPPLY (2) P.C BOARD (EM)

Ref. No.	Part No.	Description
D7	ED-405264J	D ZENER H UTZJ10C
D10	ED-307572	D SILICON H 1SS131
D50	ED-403732J	D ZENER H UTZJ5.6A
D56	ED-410359J	D ZENER H HZS15-1 T26
IC1	*EI-381575J	IC BA6121
L10	EO-380091J1	COIL FIX 2 C-5293-01 560K
TR2	*ET-405622J	TR 2SD2061 E,F
TR3	ET-389803J	TR 2SA933S R,S
TR4	ET-366168	TR 2SD1292 Q,R
TR7	*ET-405622J	TR 2SD2061 E,F
TR8	ET-389803J	TR 2SA933S R,S
TR50	ET-353897	TR DTC114ES

17. DIODE P.C BOARD (EM)

Ref. No.	Part No.	Description
D60	*ED-379298	D SILICON DBA20B 100/2.0A

18. POWER SUPPLY (1) P.C B0ARD (EOH/EOG-V/EOH-V)

Ref. No.	Part No.	Description
C1	EC-404196J	C EC V SXE12 102M 35.0DC
C2	EC-406635J	C EC V SXE16 222M 35.0DC
C4	EC-405269J	C EC V F05 LXF8 121M 35.0DC
C14	EC-405269J	C EC V F05 LXF8 121M 35.0DC
C15	EC-405269J	C EC V F05 LXF8 121M 35.0DC
C20	EC-403371J	C EC V F05 LXF8 221M 25.0DC
C23-A	EC-412318J	C EC V T05 LXA8 330M 63.0DC [EOG-V]
C23-B	EC-412135J	C EC V CUT LXF10 121M 63.0DC [EOH/EOH-V]
C24	EC-412136J	C EC V F05 LXF8 820M 63.0DC
C73	EC-403285J	C EC V T05 LXF6 121M 25.0DC
D1	*ED-511907	D SILICON 1N4002 100/1.0A
D2	*ED-511907	D SILICON 1N4002 100/1.0A
D3	*ED-511907	D SILICON 1N4002 100/1.0A
D4	*ED-511907	D SILICON 1N4002 100/1.0A
D6	*ED-386226J	D SCHOTTKY RB100AT-32T26 40/1
D8	*ED-386226J	D SCHOTTKY RB100AT-32T26 40/1
D11	*ED-386226J	D SCHOTTKY RB100AT-32T26 40/1
D16	ED-366684	D SILICON H 1SS136 F05
D17	*ED-412107J	D SILICON 1N4003 T26 200/1.0A
D18	*ED-412107J	D SILICON 1N4003 T26 200/1.0A
D19	ED-404032J	D ZENER H UTZJ39A
D20	ED-404033J	D ZENER H UTZJ33B
D27	ED-403265J	D ZENER H UTZJ15A T26
D30	ED-412105J	D ZENER H HZS5B1 T26
D32	ED-307572	D SILICON H 1SS131
D71	*ED-511907	D SILICON 1N4002 100/1.0A
D72	*ED-511907	D SILICON 1N4002 100/1.0A
D73	*ED-511907	D SILICON 1N4002 100/1.0A
D74	*ED-511907	D SILICON 1N4002 100/1.0A
D75	*ED-511907	D SILICON 1N4002 100/1.0A
D76	*ED-511907	D SILICON 1N4002 100/1.0A
D77	*ED-511907	D SILICON 1N4002 100/1.0A
D78	*ED-511907	D SILICON 1N4002 100/1.0A
D80	ED-403267J	D ZENER H MTZJ3.3B T26
D82	ED-403279J	D ZENER H UTZJ9.1B
D83	ED-386226J	D SCHOTTKY RB100AT-32T26 40/1
D88	ED-307572	D SILICON H 1SS131
D89	ED-307572	D SILICON H 1SS131
FL1	*EO-339907	COIL LF FKOB160MH16 1000.0UH [EOG-V]
FR1	*ER-400728J	R FUSE V T05 RF25SCVTP1/4WR12K
FR2	*ER-400688J	R FUSE V T05 RF25SCVTP1/4WR10K
FR3	*ER-328278	R FUSE H ERD2FC 1/4W 10R0G
FR4	*ER-307565	R FUSE H S10 ERD2FC 1/4W 6R8J
FR5	*ER-405441J	R FUSE V T05 RF25SCVTP1/4WR27K
L1	EO-408381J	COIL FIX 2 C-5344-40 560K
L2	EO-408381J	COIL FIX 2 C-5344-40 560K
L3	EO-408381J	COIL FIX 2 C-5344-40 560K
L4	EO-408381J	COIL FIX 2 C-5344-40 560K
L6	EO-386541J	COIL FIX 1 ELF1010SKI 101K
L9	EO-410254J	COIL FIX 1 LHL06TB T05 681K
R78	*ER-368461	R OMF H S12 FS 1W R22J
TR1	*ET-366365	TR 2SB1185 E,F
TR5	*ET-366365	TR 2SB1185 E,F
TR6	*ET-356817	TR 2SB891 Q,R
TR7	*ET-391025J	TR 2SD2012
TR9	*ET-366365	TR 2SB1185 E,F
TR12	*ET-408842J	TR 2SD2394 E,F
TR13	*ET-366365	TR 2SB1185 E,F
TR14	ET-397160J	TR 2SC3330 R,S,T,U,V
TR15	ET-397160J	TR 2SC3330 R,S,T,U,V
TR16	ET-397160J	TR 2SC3330 R,S,T,U,V
TR71	ET-353897	TR DTC114ES
TR72	ET-353897	TR DTC114ES
TR75	*ET-354083	TR 2SD1189 Q,R

19. POWER SUPPLY (2) P.C BOARD (EOH/EOG-V/EOH-V)

Ref. No.	Part No.	Description
C25	EC-408426J	C EC V F05 LXF8 121M 50.0DC
D31	ED-307572	D SILICON H 1SS131
D84	ED-307572	D SILICON H 1SS131
D85	ED-307572	D SILICON H 1SS131
D87	ED-403267J	D ZENER H MTZJ3.3B T26
IC1	*EI-381575J	IC BA6121
L10	EO-380091J1	COIL FIX 2 C-5293-01 560K
R77	*ER-368461	R OMF H S12 FS 1W R22J
TR2	*ET-391025J	TR 2SD2012
TR3	ET-389803J	TR 2SA933S R,S
TR8	ET-389803J	TR 2SA933S R,S
TR73	*ET-391025J	TR 2SD2012

20. VPST P.C BOARD (EOG-V)

Ref. No.	Part No.	Description
C601	EC-366613	C EC V CUT SME 102M 25.0DC
D1	ED-307572	D SILICON H 1SS131
D201	ED-307572	D SILICON H 1SS131
D601	ED-307572	D SILICON H 1SS131
D602	ED-405446J	D ZENER H UTZJ5.6B T26
FL101	EH-394684J	FILTER EMI ZBF503D-00TA T05
FR601	*ER-331188	R FUSE H S10 ERD2FC 1/4W 8R2J
IB101	EH-383056J	COMP R RGLE4X 103J
IC101	EI-416782J	IC UPD78014CW-019 QXVPT1
IC102	EI-410265J	IC ST24C04B1
IC103	EI-405224J	IC ST24C02AB1/AAB
IC104	EI-414884J	IC CF72307
IC105	EI-410125J	IC V53C464AP-80
IC106	EI-401050J	IC LVA523SA2
IC107	EI-394680J	IC AN3171K
IC108	EI-387019J	IC MC1377P
IC109	EI-414885J	IC CF72306
IC301	EI-385958J	IC SAA4700
L2	EO-345865	COIL FIX 1 EL0606SKI 100J
L3	EO-345865	COIL FIX 1 EL0606SKI 100J
L4	EO-345865	COIL FIX 1 EL0606SKI 100J
L5	EO-345865	COIL FIX 1 EL0606SKI 100J
L6	EO-345865	COIL FIX 1 EL0606SKI 100J
L121	EO-345865	COIL FIX 1 EL0606SKI 100J
L151	EO-410104J	COIL FIX 1 SPT0203SA T26 181J
L152	EO-410104J	COIL FIX 1 SPT0203SA T26 181J
L153	EO-345880	COIL FIX 1 EL0606SKI 820J
L154	EO-410099J	COIL FIX 1 SPT0203SA T26 470J
L155	EO-345865	COIL FIX 1 EL0606SKI 100J
L201	EO-345865	COIL FIX 1 EL0606SKI 100J
L202	EO-345865	COIL FIX 1 EL0606SKI 100J
L203	EO-345875	COIL FIX 1 EL0606SKI 390J
L204	EO-345873	COIL FIX 1 EL0606SKI 270J
L206	EO-345871	COIL FIX 1 EL0606SKI 180J
L207	EO-345874	COIL FIX 1 EL0606SKI 330J
L208	EO-345874	COIL FIX 1 EL0606SKI 330J
L301	EO-345865	COIL FIX 1 EL0606SKI 100J
L302	EO-345865	COIL FIX 1 EL0606SKI 100J
TR1	ET-397160J	TR 2SC3330 R,S,T,U,V
TR4	ET-354415	TR DTA144ES
TR151	ET-397160J	TR 2SC3330 R,S,T,U,V
TR152	ET-353899	TR 2SA1317 S,T,U
TR153	ET-353899	TR 2SA1317 S,T,U
TR154	ET-397160J	TR 2SC3330 R,S,T,U,V
TR155	ET-397160J	TR 2SC3330 R,S,T,U,V
TR201	ET-397160J	TR 2SC3330 R,S,T,U,V
TR202	ET-397160J	TR 2SC3330 R,S,T,U,V
TR203	ET-397160J	TR 2SC3330 R,S,T,U,V
TR204	ET-353899	TR 2SA1317 S,T,U
TR208	ET-353899	TR 2SA1317 S,T,U
TR601	ET-354083	TR 2SD1189 Q,R
X101	EI-414889J	OSC CE CST10.0MTW-TF01 T05
X102	EI-394675J	OSC X'TAL HC-49/U 13875KHZ
X103	EI-394673J	OSC X'TAL HC-49/U 8867.238KHZ

21. PDC P.C BOARD (EOH-V)

Ref. No.	Part No.	Description
D1	ED-307572	D SILICON H 1SS131
D101	ED-307572	D SILICON H 1SS131
D201	ED-307572	D SILICON H 1SS131
FL101	EH-394684J	FILTER EMI ZBF503D-00TA T05
FL102	EH-394684J	FILTER EMI ZBF503D-00TA T05
IB101	EH-383056J	COMP R RGLE4X 103J
IB102	EH-386637J	COMP R RGLE8X 103J
IC101	EI-410521J2	IC UPD75218CW-028 JXPDC3
IC102	EI-405224J	IC ST24C02AB1/AAB
IC103	EI-405224J	IC ST24C02AB1/AAB
IC104	EI-408434J	IC MV1815-1BA
IC105	EI-410125J	IC V53C464AP-80
IC106	EI-401050J	IC LVA523SA2
IC107	EI-394680J	IC AN3171K
IC108	EI-387019J	IC MC1377P
L1	EO-345865	COIL FIX 1 EL0606SKI 100J
L101	EO-345865	COIL FIX 1 EL0606SKI 100J
L102	EO-345865	COIL FIX 1 EL0606SKI 100J
L103	EO-345881	COIL FIX 1 EL0606SKI 101J
L121	EO-345865	COIL FIX 1 EL0606SKI 100J
L151	EO-410104J	COIL FIX 1 SPT0203SA T26 181J
L152	EO-410104J	COIL FIX 1 SPT0203SA T26 181J
L153	EO-345880	COIL FIX 1 EL0606SKI 820J
L154	EO-410099J	COIL FIX 1 SPT0203SA T26 470J
L155	EO-345865	COIL FIX 1 EL0606SKI 100J
L201	EO-345865	COIL FIX 1 EL0606SKI 100J
L202	EO-345865	COIL FIX 1 EL0606SKI 100J
L203	EO-345875	COIL FIX 1 EL0606SKI 390J
L204	EO-345873	COIL FIX 1 EL0606SKI 270J
L206	EO-345871	COIL FIX 1 EL0606SKI 180J
L207	EO-345874	COIL FIX 1 EL0606SKI 330J
L208	EO-345874	COIL FIX 1 EL0606SKI 330J
L251	EO-345865	COIL FIX 1 EL0606SKI 100J
TR1	ET-397160J	TR 2SC3330 R,S,T,U,V
TR101	ET-354415	TR DTA144ES
TR102	ET-397160J	TR 2SC3330 R,S,T,U,V
TR151	ET-397160J	TR 2SC3330 R,S,T,U,V
TR152	ET-353899	TR 2SA1317 S,T,U
TR153	ET-353899	TR 2SA1317 S,T,U
TR154	ET-397160J	TR 2SC3330 R,S,T,U,V
TR155	ET-397160J	TR 2SC3330 R,S,T,U,V
TR201	ET-397160J	TR 2SC3330 R,S,T,U,V
TR202	ET-397160J	TR 2SC3330 R,S,T,U,V
TR203	ET-397160J	TR 2SC3330 R,S,T,U,V
TR204	ET-353899	TR 2SA1317 S,T,U
TR208	ET-353899	TR 2SA1317 S,T,U
TR251	ET-397160J	TR 2SC3330 R,S,T,U,V
TR252	ET-353899	TR 2SA1317 S,T,U
TR253	ET-353899	TR 2SA1317 S,T,U
X101	EI-367882J1	OSC CE FCR4.19MC3 4.190MHZ
X102	EI-408433J	OSC X'TAL HC-43/U 27750KHZ
X103	EI-394673J	OSC X'TAL HC-49/U 8867.238KHZ

22. SUB P.C BOARD (EM)

Ref. No.	Part No.	Description
C1	EC-365397	C EC V CUT SME 332M 10.0DC
C2	EC-365397	C EC V CUT SME 332M 10.0DC
D1	ED-401099J	D SCHOTTKY MA719 T26 40/0.5A
D2	ED-401099J	D SCHOTTKY MA719 T26 40/0.5A
D3	ED-403267J	D ZENER H MTZJ3.3B T26
TR1	ET-366365	TR 2SB1185 E,F
TR2	ET-397160J	TR 2SC3330 R,S,T,U,V
TR3	ET-397160J	TR 2SC3330 R,S,T,U,V

23. DECODER (1) P.C BOARD (EOG-V)

Ref. No.	Part No.	Description
PJ1	EJ-389864J	SOCKET M1817 21P

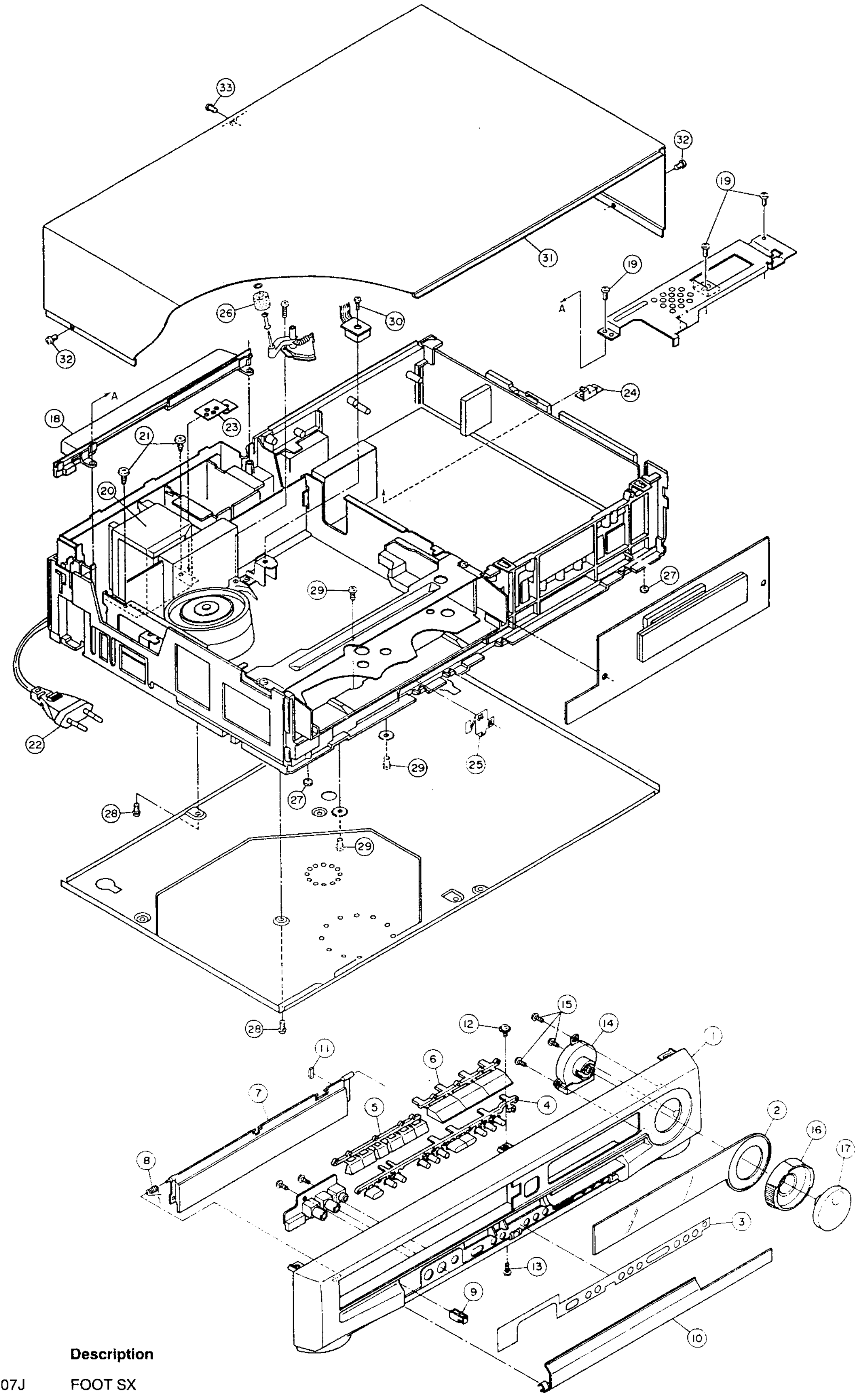
24. DECODER (2) P.C BOARD (EOG-V)

Ref. No.	Part No.	Description
D1	ED-408721J	D ZENER H HZS2B3
IC1	EI-310036	IC TC4066BP
L1	EO-345881	COIL FIX 1 EL0606SKI 101J
L2	EO-345881	COIL FIX 1 EL0606SKI 101J
TR1	ET-353899	TR 2SA1317 S,T,U
TR2	ET-397160J	TR 2SC3330 R,S,T,U,V
TR3	ET-397160J	TR 2SC3330 R,S,T,U,V
TR4	ET-397160J	TR 2SC3330 R,S,T,U,V
TR5	ET-353899	TR 2SA1317 S,T,U
TR6	ET-354414	TR DTC144ES
TR7	ET-354415	TR DTA144ES

25. FINAL ASSEMBLY

Ref. No.	Part No.	Description
1-A	SP-415391J1	PANEL FRONT (E) E1 [EXCEPT EOG-V]
1-B	SP-415392J1	PANEL FRONT (E) G1 [EOG-V]
2-A	SE-415382J	WINDOW FLD (E) 1 [EXCEPT EM/EDG]
2-B	SE-415384J	WINDOW FLD (E) 2 [EM/EDG]
3-A	SE-415377J	PLATE OP (E) E1 [EXCEPT EDG/EOG-V]
3-B	SE-415378J	PLATE OP (E) E2 [EDG]
3-C	SE-415379J	PLATE OP (E) G1 [EOG-V]
4-A	SB-415386J	BUTTON P (1) [EXCEPT EDG]
4-B	SB-415387J	BUTTON P (2) [EDG]
5-A	SB-415385J	BUTTON R (E) [EXCEPT EOG-V]
5-B	SB-415700J	BUTTON R (G) [EOG-V]
6	SB-415381J	BUTTON S
7-A	SE-415694J	MASK CASSETTE VS-G51 (E1) [EA/EDG/EO/EOH (E)]
7-B	SE-416116J	MASK CASSETTE VS-G51 (E3) [EM]
7-C	SE-415701J	MASK CASSETTE VS-G55 (G) [EOG-V]
7-D	SE-415695J	MASK CASSETTE VS-G51 (E2) [EOH (Y1)]
7-E	SE-415698J	MASK CASSETTE VS-G54 (E) [EOH-V]
8	ZG-387370J	SP MASK
9	SZ-416545J	MINI SIDE LOCK 25N164 EA [EA]
10-A	SP-415388J	DOOR (E) E1 [EA/EDG/EO/EOH (E)]
10-B	SP-415696J	DOOR (E) E2 [EM/EOH (Y1)]
10-C	SP-415389J	DOOR (E) G1 [EOG-V]
10-D	SP-415699J	DOOR (E) E3 [EOH-V]
11	SZ-407193J	CUSHION MASK (2)
12	ZS-357946	PLX PAN30X10STL CMT C080
13	ZS-365702	PLX BID30X10STL BNI
14	ES-414853J	SW ROTARY ENCODER SRGPHJ ADAP.
15	ZS-383379J	PLX BID30X08STL CMT
16	SK-415275J1	KNOB SHUTTLE
17	SK-415276J	KNOB JOG
18	SC-387353J	COVER TRANS
19	ZS-378341	PLX BID30X12STL CMT
20-A	*BT-416855J	TRANS POW V1164 EA [EA]
20-B	*BT-410488J	TRANS POW V1130 EM [EM]
20-C	*BT-410491J	TRANS POW V1130 EDG [EDG]
20-D	*BT-403873J	TRANS POW V1130 EO [EO]
20-E	*BT-410606J	TRANS POW V1146 EOG-V [EOG-V/EOH/EOH-V]
21	ZS-373962	PLX BID40X10STL CMT
22	*EW-404002M	AC CORD 200 SE-1 WITH TUBE
23	ZG-387505J	PLATE EARTH
24	ZG-387354J	PLATE EARTH (2)
25	ZG-400220J	EARTH FRONT (G)
26	HZ-408193J	ROLLER HEAD CLEANER

FINAL ASSEMBLY BLOCK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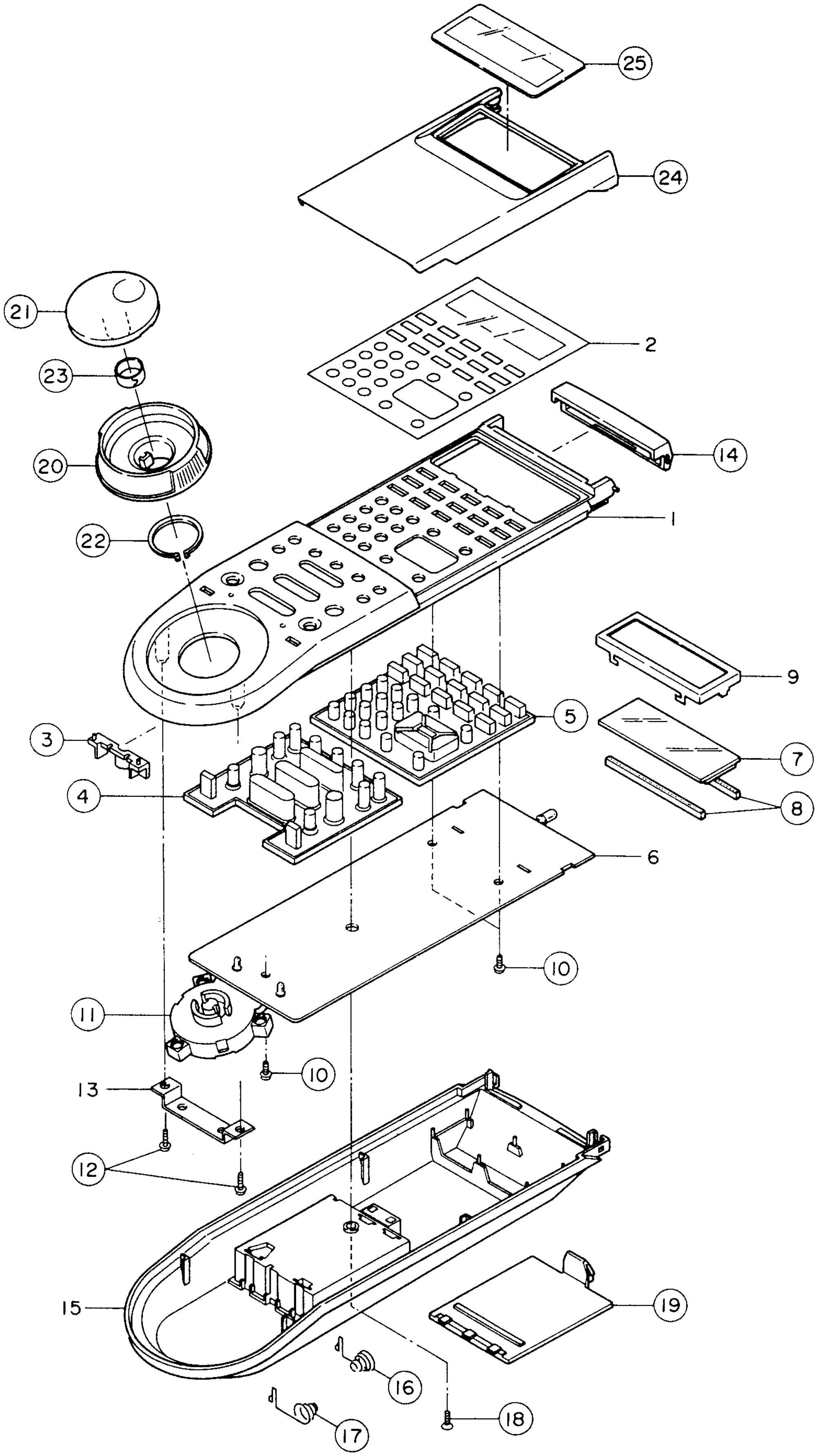
Ref. No.	Part No.	Description
27	SA-387507J	FOOT SX
28	ZS-358936	ST BID30X06STL CMT
29	ZS-362378	PLX BID30X10STL CMT
30	ZS-393459J	DT BID26X10STL CMT
31	SP-407479J	COVER UPPER JX
32	ZS-385611J	DT BID26X06STL BNI
33	ZS-391046J	PLX BID26X10STL BNI

NOTE:
Parts will not be supplied if they are not listed in the parts list, even if they appear on the assembling illustrations with reference No.

REMOCON RC-W502E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26. ACCESSARY

Ref. No.	Part No.	Description
1	EW-348414	CORD PAL
2-A	AV-B1064A010C	REMOCON BLK RC-W502E [EXCEPT EOG-V/EOH-V]
2-B	AV-B1063A010C	REMOCON BLK RC-W501E [EOH-V]
2-C	AV-B1063A010D	REMOCON BLK RC-W501G [EOG-V]

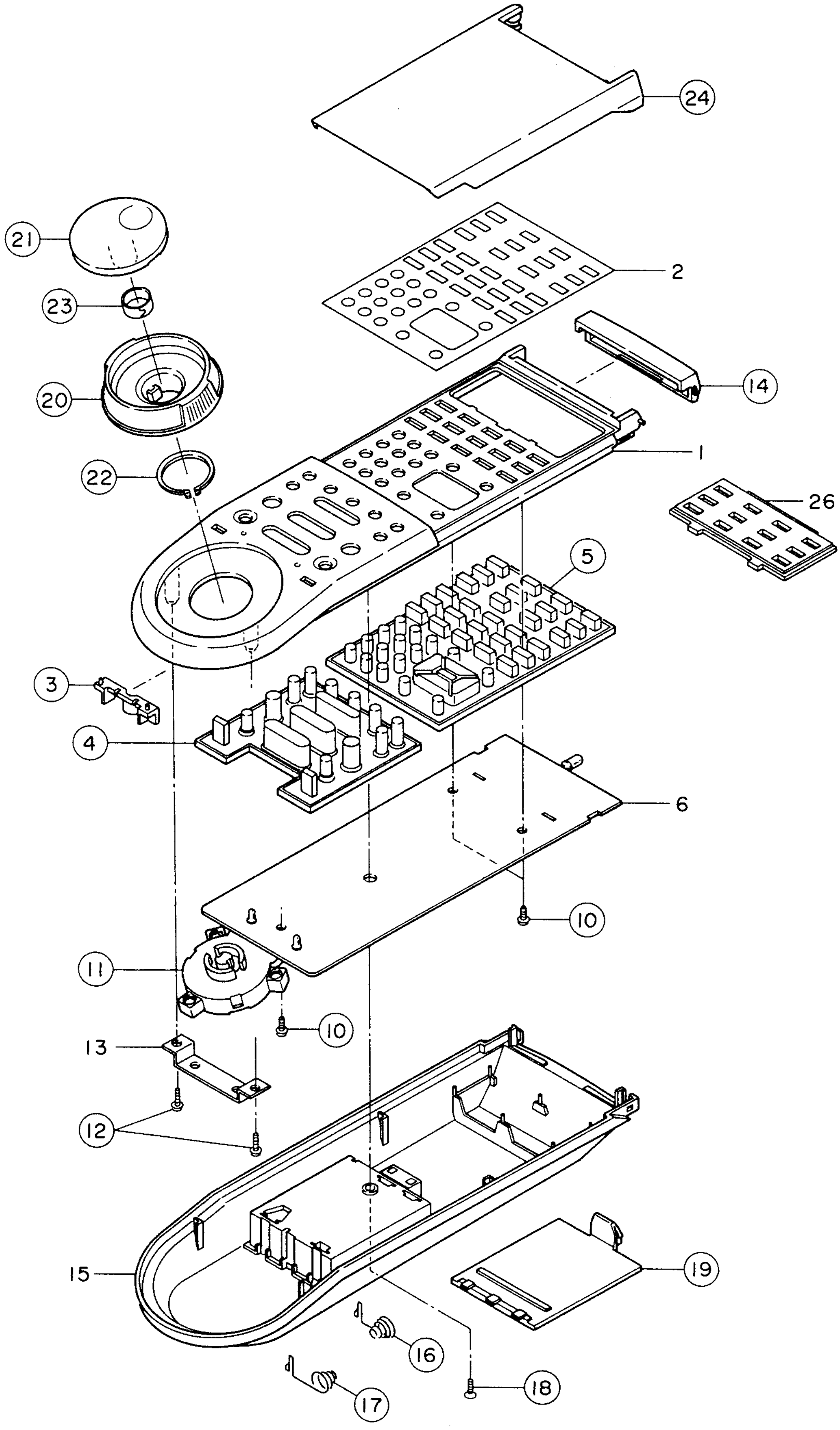
27. REMOCON RC-W502E

Ref. No.	Part No.	Description
3	SE-407612J	LENS (V)
4	MB-412384J	KEY RUBBER (V1)-2
5	MB-414479J	KEY RUBBER (W)-E
7	EM-408437J	IND LCD LD-B5444A ENGLISH
8	EJ-412291J	TERMINAL LCD (6) B1043
10	ZS-374389	PT BID20X06STL BNI
11	ES-408428J	SW ROTARY ENCODER SRGPPJ
12	ZS-336614	PT PAN26X08STL CMT
14	SE-407625J	FILTER (V)
16	ZG-407614J1	TERMINAL BATTERY (V3)
17	ZG-407615J1	TERMINAL BATTERY (V4)
18	ZS-409324J	PT CTS26X08STL BNI
19	SC-407627J	COVER BATTERY (V)
20	SK-414500J	KNOB RING
21	SK-407708J	KNOB JOG
22	SZ-408436J	RING C S-19
23	SZ-408435J	COMPRESSION RING 10193
24	SP-414482J1	DOOR PANEL (W)-502E
25	SE-407613J	WINDOW DOOR (W)

28. REMOCON P.C BOARD RC-W502

Ref. No.	Part No.	Description
D1	ED-403450J	D LED SE303ARF-C INFRARED
D2	ED-397391J	D LED BR3668S RED
D3	ED-397391J	D LED BR3668S RED
D4	ED-386031J	D SILICON CHIP MA110-TW
D5	ED-386031J	D SILICON CHIP MA110-TW
D6	ED-386031J	D SILICON CHIP MA110-TW
D7	ED-386031J	D SILICON CHIP MA110-TW
D8	ED-386031J	D SILICON CHIP MA110-TW
D9	ED-386031J	D SILICON CHIP MA110-TW
D10	ED-386031J	D SILICON CHIP MA110-TW
D11	ED-386031J	D SILICON CHIP MA110-TW
IC1	EI-414772J	IC M50933-132FP QXLCDR1
IC2	EI-400672J	IC S-8052ALB-LE
SW1	ES-393431J	SW TACT CHIP SKHUAB T12E
TR1	ET-405342J	TR.CHIP 2SD1620
X1	EI-368825M	OSC X'TAL C-002RX 32.768KHZ
X2	EI-403451J	OSC CE CSB1200J 1.200MHZ
1	ZG-407616J	TERMINAL BATTERY (V1)
2	ZG-407617J	TERMINAL BATTERY (V2)

REMOCON RC-W501E/G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29. REMOCON RC-W501E/G

Ref. No.	Part No.	Description
3	SE-407612J	LENS (V)
4	MB-412384J	KEY RUBBER (V1)-2
5	MB-414495J	KEY RUBBER (V2)-E
10	ZS-374389	PT BID20X06STL BNI
11	ES-408428J	SW ROTARY ENCODER SRGPPJ
12	ZS-336614	PT PAN26X08STL CMT
14	SE-407625J	FILTER (V)
16	ZG-407614J1	TERMINAL BATTERY (V3)
17	ZG-407615J1	TERMINAL BATTERY (V4)
18	ZS-409324J	PT CTS26X08STL BNI
19	SC-407627J	COVER BATTERY (V)
20	SK-414500J	KNOB RING
21	SK-407708J	KNOB JOG
22	SZ-408436J	RING C S-19
23	SZ-408435J	COMPRESSION RING 10193
24-A	SP-414498J1	DOOR PANEL (V)-501E
24-B	SP-414499J1	DOOR PANEL (V)-501G

30. REMOCON P.C BOARD RC-W501

Ref. No.	Part No.	Description
D1	ED-403450J	D LED SE303ARF-C INFRARED
D2	ED-397391J	D LED BR3668S RED
D3	ED-397391J	D LED BR3668S RED
IC1	EI-416509J	IC UPD75004GB-880-3B4 QVPTR1
IC2	EI-400672J	IC S-8052ALB-LE
TR1	ET-405342J	TR.CHIP 2SD1620
X1	EI-408450J	OSC CE CST2.45MGW 2.450MHZ
1	ZG-407616J	TERMINAL BATTERY (V1)
2	ZG-407617J	TERMINAL BATTERY (V2)

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BAV1161A500C	5-4-F
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BAV1164A500C	5-4-C
BAV1166A500A	5-4-D
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BAV1166A610H	5-2-C
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BAV1170A600F	5-1-G
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BAV1170A630C	5-3-B
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EH394684J	20-FL101	EI410265J	20-IC102	EO345880	6-L505	EO408381J	15-L4
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EH394684J	21-FL102	EI414772J	28-IC1	EO345880	6-L570	EO408381J	18-L2
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EH416491J	6-DL500	EI414884J	20-IC104	EO345881	7-L601	EO410099J	21-L154
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ABBREVIATIONS (VIDEO)

ABBREVIATION	EXPLANATION	ABBREVIATION	EXPLANATION
A	Audio or Analogue	MOD	MODulator
AC	Alternating Current	MRS	Motor ReverSe
ACC	Automatic Color Control	NG	Noise Gate
A/C	Audio and Control	NICAM	Near Instanteneous Compand Audio Multiplex
ADJ	ADJust (ment)		
AFC	Automatic Frequency Control	NON-LIN	NON-LINear
AFT	Automatic Fine Tuning	N.T.S.C.	National Television System Committee
AGC	Automatic Gain Control	OSC	OSCillator
AH	Audio Head	PAL	Phase Alternation by Line
AL	ALways (voltage)	PB	Play Back
ALC	Automatic Level Control	PCB (P.C.B)	Printed Circuit Board
A-SW.P	Audio SWitching Pulse	P-COM	Phase-COMparator
A-MUTE	Audio MUTE	P DOWN	Power DOWN
ANT	ANTenna	PG	Pulse Generator
APC	Automatic Phase Control	P.I.P	Picture In Picture
ASSY	ASSemblY	PL, PLG	PLunger (PLunGer)
BAL	BALance	PRG (PGM)	PRoGram (ProGraM)
B DOWN	Break DOWN	PU	Pick UP (head, pulse)
BGP	Burst Gate Pulse	PWR	PoWeR
BLK	BLocK or BLacK	Q	Quality factor
BPF	Band Pass Filter	R	Right
BU	Back Up (voltage)	RAM	Random Access Memory
B/W	Black and White	REC	RECord
C	Chroma or Color	REF	REFerence
CCD	Charge Coupled Device	REF-V	REFerence Vertical signal
CCIR	Comité Consultatif International des Radio communications	REG	REGulator
		REV (REVW)	REView (REVieW)
CH (ch)	CHannel (channel)	REW	REWind
CLK	CLocK	RF	Radio Frequency
CM	Capstan Motor	ROM	Read Only Memory
CN	CoNnector	R.S SW	Record-Safety SWitch
COMP	COMParator	RST (RES)	ReSet (RESet)
CSW	Cassette SWitch	RVS	ReVerSe
CSYNC	Composite SYNC	S	Sensor, Shield
CTL	ConTrol	SAW	Surface Acoustic Wave
CUE	CUE	SC	SimulCast
DAC	Digital to Analog Converter	S CLK	Serial CLocK
DC	Direct Current	SECAM	SÉquentiel Couleur À Mémoire
DEMOD	DEMODulator	S & H	Sample and Hold
DET	DETetct (DETector)	SLP	Super Long Play
DL	Delay Line	SP	Standard Play
DM	Drum Motor	SPD	SPeeD
DOC	Drop Out Compensator	SRP	Supply Reel Pulse
D.P.E	Drum Phase Error	SRV	SeRVo
D.PG	Drum Pulse Generator	SOW	Sync On Word
EE	Electronic to Electronic	STBY	STandBY
EF	Emitter Follower	S.VHS	Super VHS
EMPHA	EMPHAsis	SW	SWitch
ENV	ENVelope	SW'NG	SWitchiNG
EP	Extended Play	SWP	SWitching Pulse
EP ROM	Erasable Programmable ROM	SYNC	SYNChronize
EQ	EQualizer	T-AUDIO	Tuner AUDIO
FE	Full track Erase	TPZ (TRAPE)	TraPeZoid (TRAPEzoid)
FF	Flip-Flop or Fast Foward	TRK	TRacKing
FG	Frequency Generator	TRP	Take up Reel Pulse
Fig	Figure	T/U	Take Up
FLD	FLuorescent Display	TV	TeleVision
FM	Frequency Modulation	UHF	Ultra High Frequency
Fo	resonance Frequency	UNR	UNRegulated (voltage)
FREQ	FREQuency	V	Vertical or Video
GND	GrouND	VASS	Video Address Search System
H	Horizontal	VCO	Voltage Controlled Oscillator
HP	Horizontal (sync) pulse	VH	Video Head
HPF	High Pass Filter	VHF	Very High Frequency
HQ	High Quality System	VHS	Video Home System
IC	Integrated Circuit	VIF	Video Intermediate Frequency
ID	IDentification	VISS	Video Index Search System
IDL	IDLe (Voltage)	VJ	Video Judge
IMS	Interactive Monitor System	VM	Voltage for Memory
INS	INSert	VOB	Video On Blank
INV	INVerter	VOW	Video On Word
L	Left	VP	Vertical (sync) Pulse
LED	Light Emitting Diode	VPS	Video Program System
LIM	LIMitter	VPT	Video Programming by video Text
LM	Loading Motor	VT	Voltage for Tuning
LM STP	Loading Motor STop	WHT	WHiTe
LP	Long Play	Y	Luminance
LPF	Low Pass Filter	2H	2 Hour (SP)
ME-SECAM	Middle East SECAM	4H	4 Hour (LP)
MI-COM	MIcro COMputer	6H	6 Hour (SLP/EP)
MM	Mono-stayble Multi		

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950 Printed in Japan

Part No.	Ref. No.
EV389489J	6-VR402
EV396023J	11-VR2
EV396023J	12-VR2
EV397066J	6-VR301
EV397066J	6-VR404
EV403967J	7-VR801
EV403988J	8-VR1
EV403988J	8-VR2
EV405248J	8-VR3
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EW404002M	25-22
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EW414864J	9-2
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ABBREVIATIONS (VIDEO)

ABBREVIATION	EXPLANATION	ABBREVIATION	EXPLANATION
A	Audio or Analogue	MOD	MODulator
AC	Alternating Current	MRS	Motor ReverSe
ACC	Automatic Color Control	NG	Noise Gate
A/C	Audio and Control	NICAM	Near Instanteneous Compand Audio Multiplex
ADJ	ADJust (ment)		
AFC	Automatic Frequency Control	NON-LIN	NON-LINear
AFT	Automatic Fine Tuning	N.T.S.C.	National Television System Committee
AGC	Automatic Gain Control	OSC	OSCillator
AH	Audio Head	PAL	Phase Alternation by Line
AL	ALways (voltage)	PB	Play Back
ALC	Automatic Level Control	PCB (P.C.B)	Printed Circuit Board
A-SW.P	Audio SWitching Pulse	P-COM	Phase-COMparator
A-MUTE	Audio MUTE	P DOWN	Power DOWN
ANT	ANTenna	PG	Pulse Generator
APC	Automatic Phase Control	P.I.P	Picture In Picture
ASSY	ASSemblY	PL, PLG	PLunger (PLunGer)
BAL	BALance	PRG (PGM)	PRoGram (ProGraM)
B DOWN	Break DOWN	PU	Pick UP (head, pulse)
BGP	Burst Gate Pulse	PWR	PoWeR
BLK	BLocK or BLacK	Q	Quality factor
BPF	Band Pass Filter	R	Right
BU	Back Up (voltage)	RAM	Random Access Memory
B/W	Black and White	REC	RECord
C	Chroma or Color	REF	REFerence
CCD	Charge Coupled Device	REF-V	REFerence Vertical signal
CCIR	Comité Consultatif International des Radio communications	REG	REGulator
		REV (REVW)	REView (REVieW)
CH (ch)	CHannel (channel)	REW	REWind
CLK	CLocK	RF	Radio Frequency
CM	Capstan Motor	ROM	Read Only Memory
CN	CoNnector	R.S SW	Record-Safety SWitch
COMP	COMParator	RST (RES)	ReSet (RESet)
CSW	Cassette SWitch	RVS	ReVerSe
CSYNC	Composite SYNC	S	Sensor, Shield
CTL	ConTrol	SAW	Surface Acoustic Wave
CUE	CUE	SC	SimulCast
DAC	Digital to Analog Converter	S CLK	Serial CLocK
DC	Direct Current	SECAM	SÉquentiel Couleur À Mémoire
DEMOD	DEMODulator	S & H	Sample and Hold
DET	DETetct (DETector)	SLP	Super Long Play
DL	Delay Line	SP	Standard Play
DM	Drum Motor	SPD	SPeeD
DOC	Drop Out Compensator	SRP	Supply Reel Pulse
D.P.E	Drum Phase Error	SRV	SeRVo
D.PG	Drum Pulse Generator	SOW	Sync On Word
EE	Electronic to Electronic	STBY	STandBY
EF	Emitter Follower	S.VHS	Super VHS
EMPHA	EMPHAsis	SW	SWitch
ENV	ENVelope	SW'NG	SWitchiNG
EP	Extended Play	SWP	SWitching Pulse
EP ROM	Erasable Programmable ROM	SYNC	SYNChronize
EQ	EQualizer	T-AUDIO	Tuner AUDIO
FE	Full track Erase	TPZ (TRAPE)	TraPeZoid (TRAPEzoid)
FF	Flip-Flop or Fast Foward	TRK	TRacKing
FG	Frequency Generator	TRP	Take up Reel Pulse
Fig	Figure	T/U	Take Up
FLD	FLuorescent Display	TV	TeleVision
FM	Frequency Modulation	UHF	Ultra High Frequency
Fo	resonance Frequency	UNR	UNRegulated (voltage)
FREQ	FREQuency	V	Vertical or Video
GND	GrouND	VASS	Video Address Search System
H	Horizontal	VCO	Voltage Controlled Oscillator
HP	Horizontal (sync) pulse	VH	Video Head
HPF	High Pass Filter	VHF	Very High Frequency
HQ	High Quality System	VHS	Video Home System
IC	Integrated Circuit	VIF	Video Intermediate Frequency
ID	IDentification	VISS	Video Index Search System
IDL	IDLe (Voltage)	VJ	Video Judge
IMS	Interactive Monitor System	VM	Voltage for Memory
INS	INSert	VOB	Video On Blank
INV	INVerter	VOW	Video On Word
L	Left	VP	Vertical (sync) Pulse
LED	Light Emitting Diode	VPS	Video Program System
LIM	LIMitter	VPT	Video Programming by video Text
LM	Loading Motor	VT	Voltage for Tuning
LM STP	Loading Motor STop	WHT	WHiTe
LP	Long Play	Y	Luminance
LPF	Low Pass Filter	2H	2 Hour (SP)
ME-SECAM	Middle East SECAM	4H	4 Hour (LP)
MI-COM	MIcro COMputer	6H	6 Hour (SLP/EP)
MM	Mono-stayble Multi		

AKAI ELECTRIC CO., LTD.

12-14, 2-Chome, Higashi-Kojiya, Ohta-ku, Tokyo, Japan
SERVICE DEPARTMENT TEL:Tokyo (3745)9884 TELEX:J26261
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AKAI

MODEL VS-G51EA/EDG/EM/EO/EOH
MODEL VS-G54EOH-V, G55EOG-V

SCHEMATIC DIAGRAMS AND PC BOARDS

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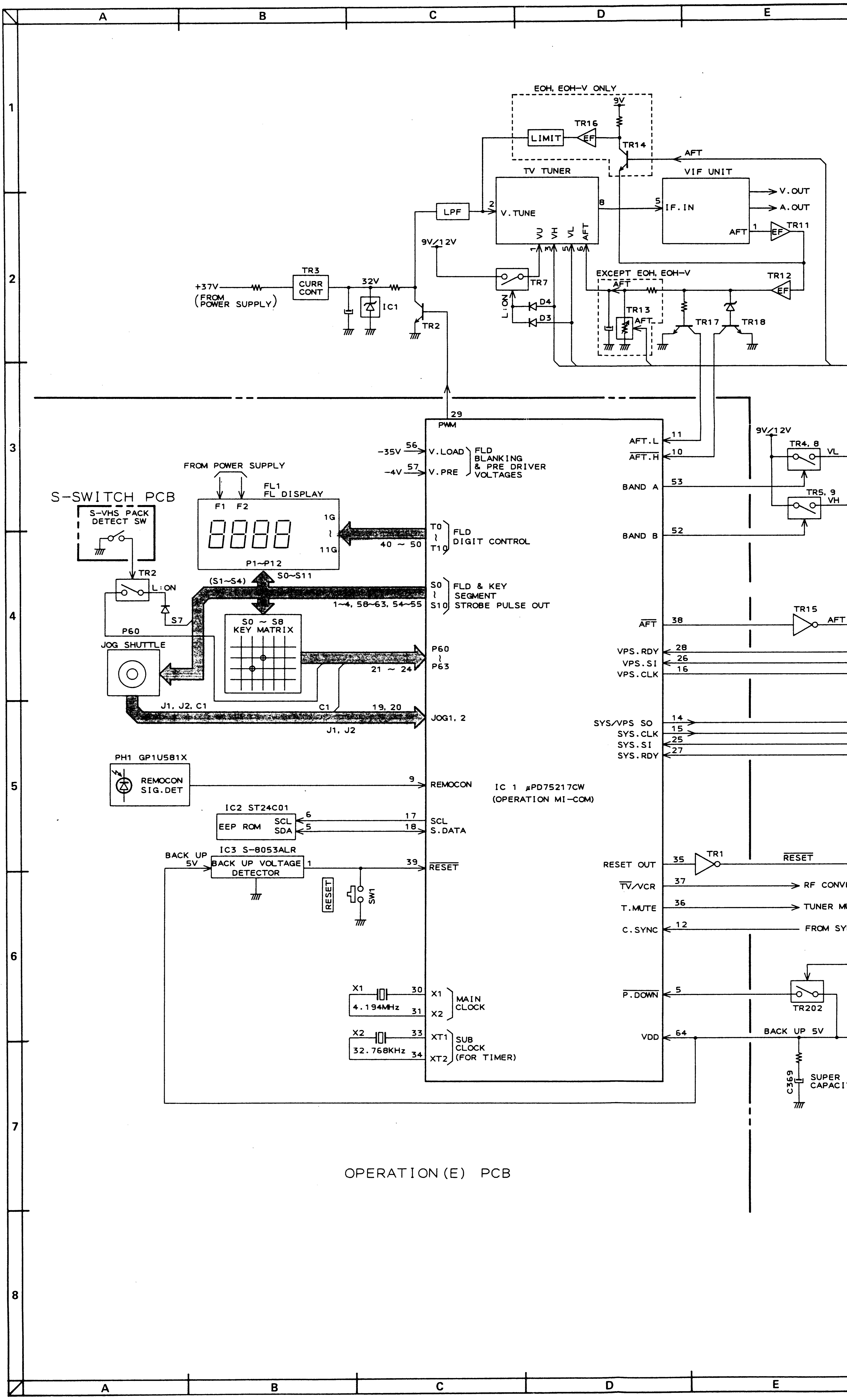
III. INFORMATION OF ICs 44

Use these schematic diagrams and PC boards together with the provided service manual.


A
B
C
D
E
1
2
3
4
5
6
7
8
EOH, EOH-V ONLY
9V
LIMIT
TR16
EF
TR14
AFT
TV TUNER
VIF UNIT
LPF
2
V.TUNE
8
5
IF.IN
V.OUT
A.OUT
AFT
1
EF
TR11
9V/12V
VU
VH
VL
AFT
1
3
4
5
6
TR7
EXCEPT EOH, EOH-V
AFT
TR12
EF
+37V
(FROM POWER SUPPLY)
TR3
CURR CONT
32V
IC1
TR2
L:ON
D4
D3
TR13
AFT
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TR18
29
PWM
-35V
56
V.LOAD
-4V
57
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FROM POWER SUPPLY
FL1
FL DISPLAY
F1
F2
1G
~
11G
8888
P1~P12
T0
~
T10
FLD DIGIT CONTROL
40 ~ 50
S-SWITCH PCB
S-VHS PACK DETECT SW
TR2
L:ON
S7
(S1~S4)
S0~S11
S0 ~ S8
KEY MATRIX
1~4, 58~63, 54~55
S0
~
S10
FLD & KEY SEGMENT STROBE PULSE OUT
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JOG SHUTTLE
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P60
~
P63
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C1
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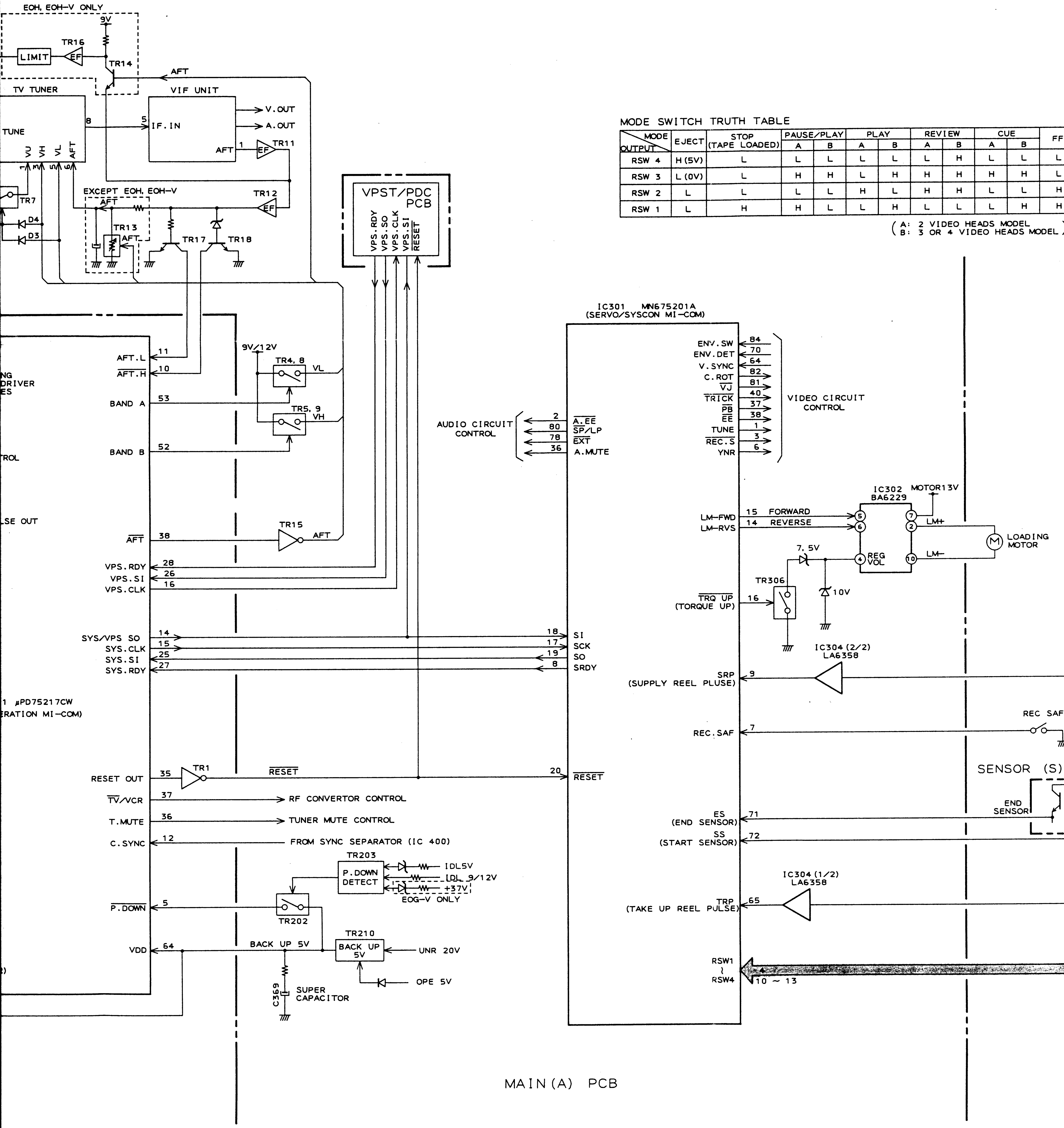
JOG1, 2
J1, J2
PH1 GP1U581X
REMOCON SIG.DET
9
REMOCON
IC 1 μPD75217CW
(OPERATION MI-COM)
IC2 ST24C01
EEP ROM
SCL
SDA
6
5
17
18
SCL
S.DATA
IC3 S-8053ALR
BACK UP 5V
BACK UP VOLTAGE DETECTOR
1
39
RESET
RESET
SW1
X1
4.194MHz
30
31
X1
X2
MAIN CLOCK
X2
32.768KHz
33
34
XT1
XT2
SUB CLOCK (FOR TIMER)
AFT.L
AFT.H
11
10
BAND A
53
BAND B
52
AFT
38
VPS.RDY
VPS.SI
VPS.CLK
28
26
16
SYS/VPS SO
SYS.CLK
SYS.SI
SYS.RDY
14
15
25
27
RESET OUT
35
TR1
RESET
TV/VCR
37
RF CONV
T.MUTE
36
TUNER M
C.SYNC
12
FROM SY
P.DOWN
5
TR202
VDD
64
BACK UP 5V
C369
SUPER CAPACI
9V/12V
TR4, 8
VL
TR5, 9
VH
TR15
AFT
OPERATION (E) PCB


EOH, EOH–V ONLY
9V
TR16
LIMIT
EF
TR14
AFT
TV TUNER
VIF UNIT
TUNE
8
5
IF.IN
V.OUT
A.OUT
AFT
1
EF
TR11
VU
VH
VL
AFT
1
3
5
6
TR7
D4
D3
EXCEPT EOH, EOH–V
AFT
TR13
AFT
TR17
TR18
TR12
EF
VPST/PDC PCB
VPS.RDY
VPS.SO
VPS.CLK
VPS.SI
RESET
NG
DRIVER
ES
TROL
LSE OUT
1 µPD75217CW
ERATION MI–COM)
AFT.L
11
AFT.H
10
BAND A
53
BAND B
52
9V/12V
TR4, 8
VL
TR5, 9
VH
AFT
38
TR15
AFT
VPS.RDY
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VPS.SI
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VPS.CLK
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SYS/VPS SO
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SYS.SI
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SYS.RDY
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TV/VCR
37
RF CONVERTOR CONTROL
T.MUTE
36
TUNER MUTE CONTROL
C.SYNC
12
FROM SYNC SEPARATOR (IC 400)
TR203
P.DOWN DETECT
IDL5V
IDL 9/12V
+37V
EOG–V ONLY
P.DOWN
5
TR202
VDD
64
BACK UP 5V
TR210
BACK UP 5V
UNR 20V
OPE 5V
C369
SUPER CAPACITOR
IC301 MN675201A
(SERVO/SYSCON MI–COM)
AUDIO CIRCUIT CONTROL
2
A.EE
80
SP/LP
78
EXT
36
A.MUTE
ENV.SW
84
ENV.DET
70
V.SYNC
64
C.ROT
82
VJ
81
TRICK
40
PB
37
EE
38
TUNE
1
REC.S
3
YNR
6
VIDEO CIRCUIT CONTROL
18
SI
17
SCK
19
SO
8
SRDY
20
RESET
IC302 BA6229
MOTOR13V
LM–FWD
15 FORWARD
LM–RVS
14 REVERSE
5
6
7
2
4
10
LM+
LM–
REG VOL
LOADING MOTOR
7. 5V
TR306
10V
TRQ UP
(TORQUE UP)
16
IC304 (2/2)
LA6358
SRP
(SUPPLY REEL PLUSE)
9
REC SAF
REC.SAF
7
SENSOR (S)
END SENSOR
ES
(END SENSOR)
71
SS
(START SENSOR)
72
IC304 (1/2)
LA6358
TRP
(TAKE UP REEL PULSE)
65
RSW1
~
RSW4
4
10 ~ 13
MAIN (A) PCB

MODE SWITCH TRUTH TABLE

MODE / OUTPUT	EJECT	STOP (TAPE LOADED)	PAUSE/PLAY		PLAY		REVIEW		CUE		FF
			A	B	A	B	A	B	A	B	
RSW 4	H (5V)	L	L	L	L	L	L	H	L	L	L
RSW 3	L (0V)	L	H	H	L	H	H	H	H	H	L
RSW 2	L	L	L	L	H	L	H	H	L	L	H
RSW 1	L	H	H	L	L	H	L	L	L	H	H

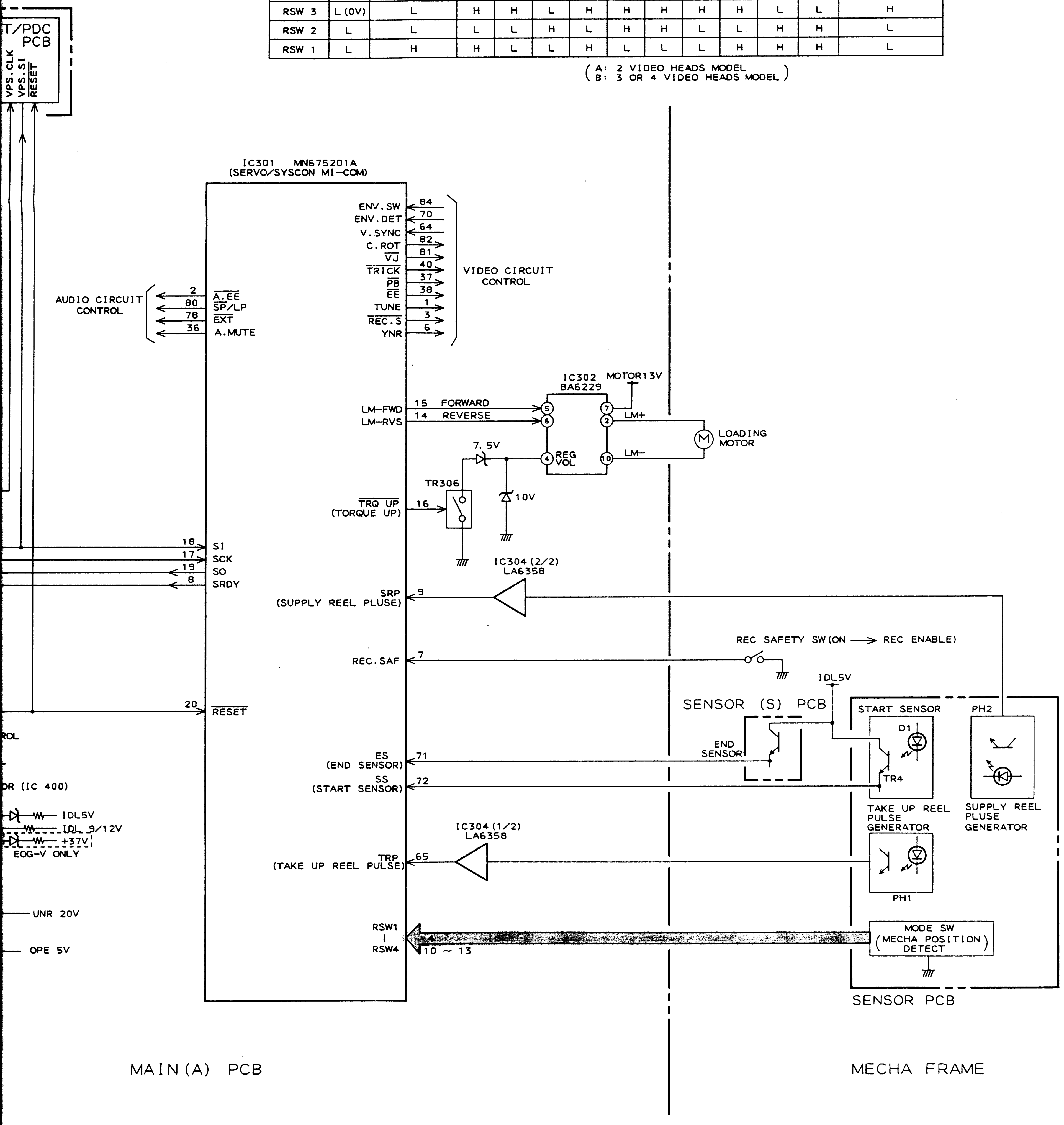
(A: 2 VIDEO HEADS MODEL
B: 3 OR 4 VIDEO HEADS MODEL)

VS
VS
OP
BL

MODE SWITCH TRUTH TABLE

MODE / OUTPUT	EJECT	STOP (TAPE LOADED)	PAUSE/PLAY		PLAY		REVIEW		CUE		FF	REW	POWER OFF (WITH CASSETTE)
			A	B	A	B	A	B	A	B			
RSW 4	H (5V)	L	L	L	L	L	L	H	L	L	L	L	H
RSW 3	L (0V)	L	H	H	L	H	H	H	H	H	L	L	H
RSW 2	L	L	L	L	H	L	H	H	L	L	H	H	L
RSW 1	L	H	H	L	L	H	L	L	L	H	H	H	L

(A: 2 VIDEO HEADS MODEL
B: 3 OR 4 VIDEO HEADS MODEL)


T/PDC PCB
VPS.CLK
VPS.SI
RESET
IC301 MN675201A
(SERVO/SYSCON MI-COM)
ENV.SW 84
ENV.DET 70
V.SYNC 64
C.ROT 82
VJ 81
TRICK 40
PB 37
EE 38
TUNE 1
REC.S 3
YNR 6
VIDEO CIRCUIT CONTROL
AUDIO CIRCUIT CONTROL
2 A.EE
80 SP/LP
78 EXT
36 A.MUTE
IC302 BA6229
MOTOR13V
LM-FWD 15 FORWARD
LM-RVS 14 REVERSE
LM+
LM-
REG VOL
7.5V
10V
LOADING MOTOR
TR306
TRQ UP (TORQUE UP) 16
18 SI
17 SCK
19 SO
8 SRDY
IC304 (2/2) LA6358
SRP (SUPPLY REEL PLUSE) 9
REC.SAF 7
REC SAFETY SW (ON ⟶ REC ENABLE)
IDL5V
20 RESET
ROL
OR (IC 400)
IDL5V
IDL 9/12V
+37V
EOG-V ONLY
UNR 20V
OPE 5V
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ES (END SENSOR) 71
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START SENSOR
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TR4
PH2
TAKE UP REEL PULSE GENERATOR
SUPPLY REEL PLUSE GENERATOR
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PH1
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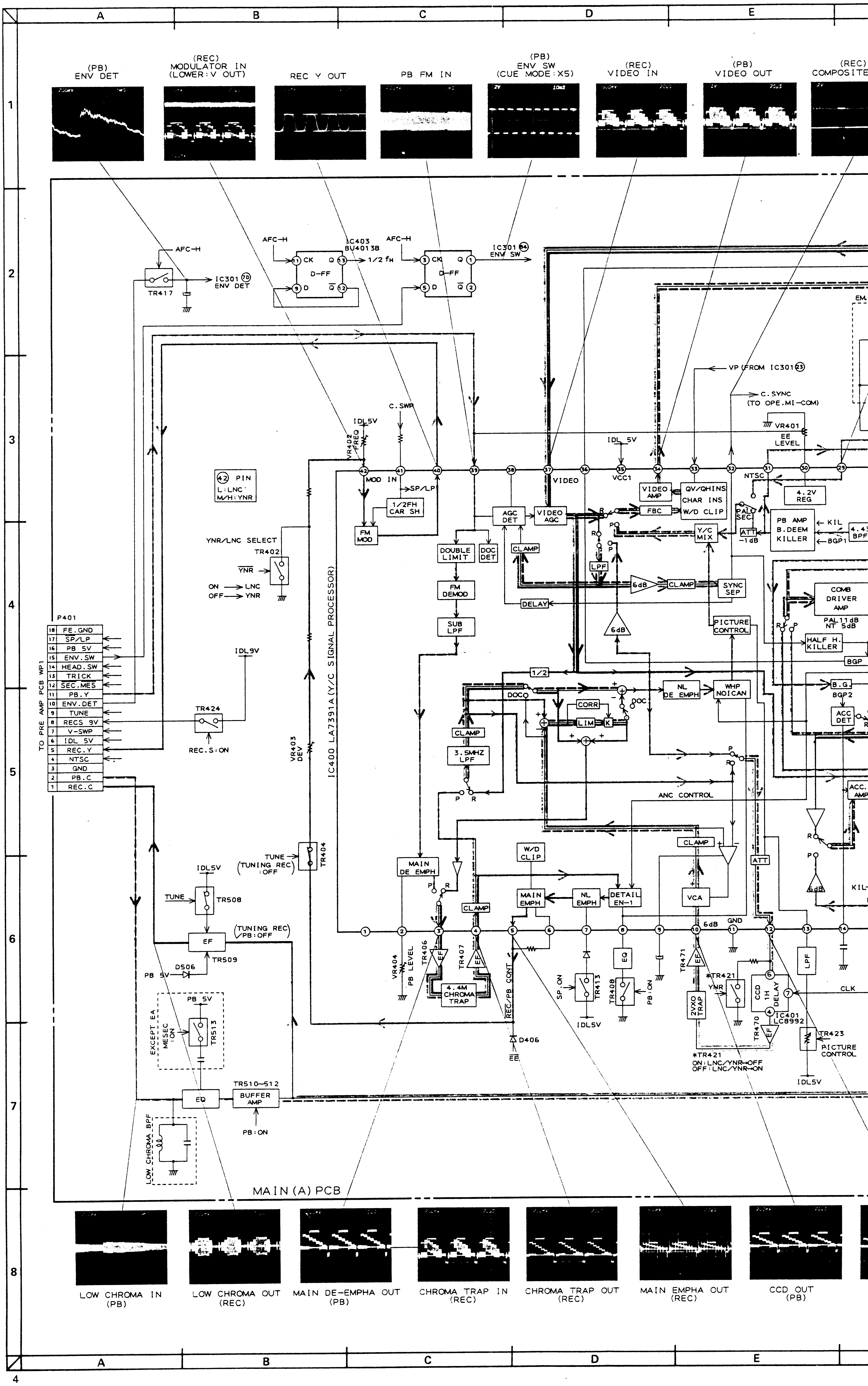
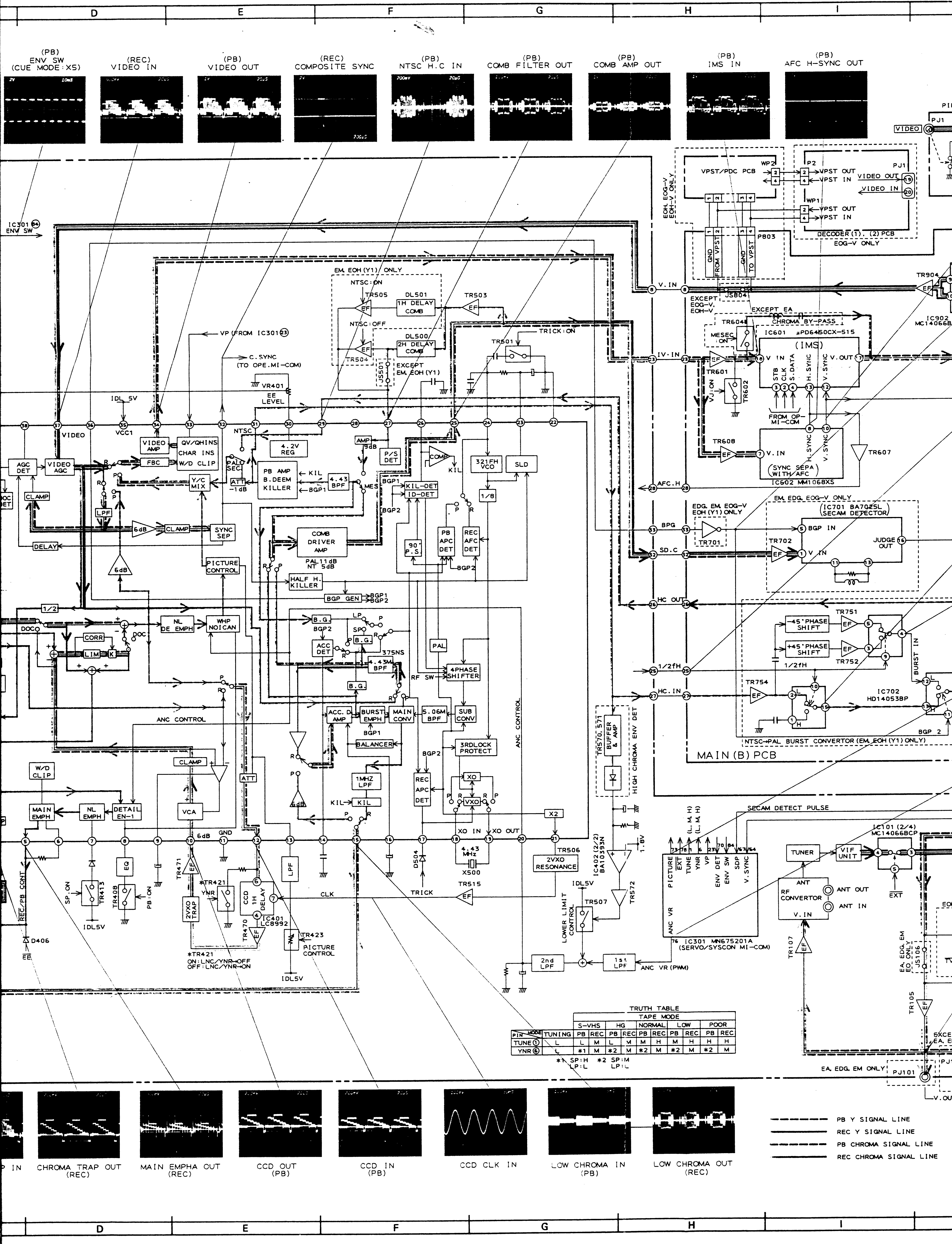
10 ~ 13
MODE SW (MECHA POSITION DETECT)
SENSOR PCB
MAIN (A) PCB
MECHA FRAME

VS-G51EA/EDG/EM/EO/EOH
VS-G54EOH-V, G55EOG-V
OPERATION (E) & SYSCON
BLOCK DIAGRAM
No.7-1 V117051M
A2


A
B
C
D
E
1
2
3
4
5
6
7
8
(PB) ENV DET
(REC) MODULATOR IN (LOWER: V OUT)
REC Y OUT
PB FM IN
(PB) ENV SW (CUE MODE: X5)
(REC) VIDEO IN
(PB) VIDEO OUT
(REC) COMPOSITE
AFC-H
TR417
IC301 ⑳ ENV DET
IC403 BU4013B
CK
D-FF
1/2 fH
IC301 ㉞ ENV SW
VP (FROM IC301 ㉓)
C.SYNC (TO OPE.MI-COM)
VR401 EE LEVEL
IDL 5V
VCC1
VIDEO
NTSC
C.SWP
VR402 FREQ
MOD IN
SP/LP
1/2FH CAR SH
FM MOD
㊷ PIN L: LNC M/H: YNR
YNR/LNC SELECT
TR402
ON → LNC
OFF → YNR
AGC DET
VIDEO AGC
VIDEO AMP
QV/QHINS CHAR INS W/D CLIP
FBC
Y/C MIX
4.2V REG
PAL SEC
ATT -1dB
PB AMP B.DEEM KILLER
KIL
BGP1
DOUBLE LIMIT
DOC DET
CLAMP
LPF
6dB
SYNC SEP
FM DEMOD
DELAY
SUB LPF
PICTURE CONTROL
COMB DRIVER AMP
PAL 11dB NT 5dB
HALF H. KILLER
BGP
B.G.
BGP2
ACC DET
ACC. AMP
P401
18 FE.GND
17 SP/LP
16 PB 5V
15 ENV.SW
14 HEAD.SW
13 TRICK
12 SEC.MES
11 PB.Y
10 ENV.DET
9 TUNE
8 RECS 9V
7 V-SWP
6 IDL 5V
5 REC.Y
4 NTSC
3 GND
2 PB.C
1 REC.C
TO PRE AMP PCB WP1
IDL9V
TR424
REC.S: ON
VR403 DEV
IC400 LA7391A (Y/C SIGNAL PROCESSOR)
1/2
NL DE EMPH
WHP NOICAN
DOC
CORR
LIM
K
3.5MHZ LPF
ANC CONTROL
W/D CLIP
MAIN EMPH
NL EMPH
DETAIL EN-1
VCA
ATT
KIL
MAIN DE EMPH
TUNE (TUNING REC :OFF)
TR404
IDL5V
TR508
EF
(TUNING REC / PB: OFF)
TR509
D506
PB 5V
EXCEPT EA MESEC :ON
TR513
EQ
TR510-512 BUFFER AMP
PB: ON
LOW CHROMA BPF
VR404 PB LEVEL
TR406
TR407
4.4M CHROMA TRAP
REC/PB CONT
D406
EE
SP ON
TR413
TR408
PB: ON
GND
TR471
2VXO TRAP
*TR421
YNR
CCD 1H DELAY
IC401 LC8992
TR470
TR423 PICTURE CONTROL
CLK
*TR421 ON: LNC/YNR→OFF OFF: LNC/YNR→ON
MAIN (A) PCB
LOW CHROMA IN (PB)
LOW CHROMA OUT (REC)
MAIN DE-EMPHA OUT (PB)
CHROMA TRAP IN (REC)
CHROMA TRAP OUT (REC)
MAIN EMPHA CUT (REC)
CCD OUT (PB)

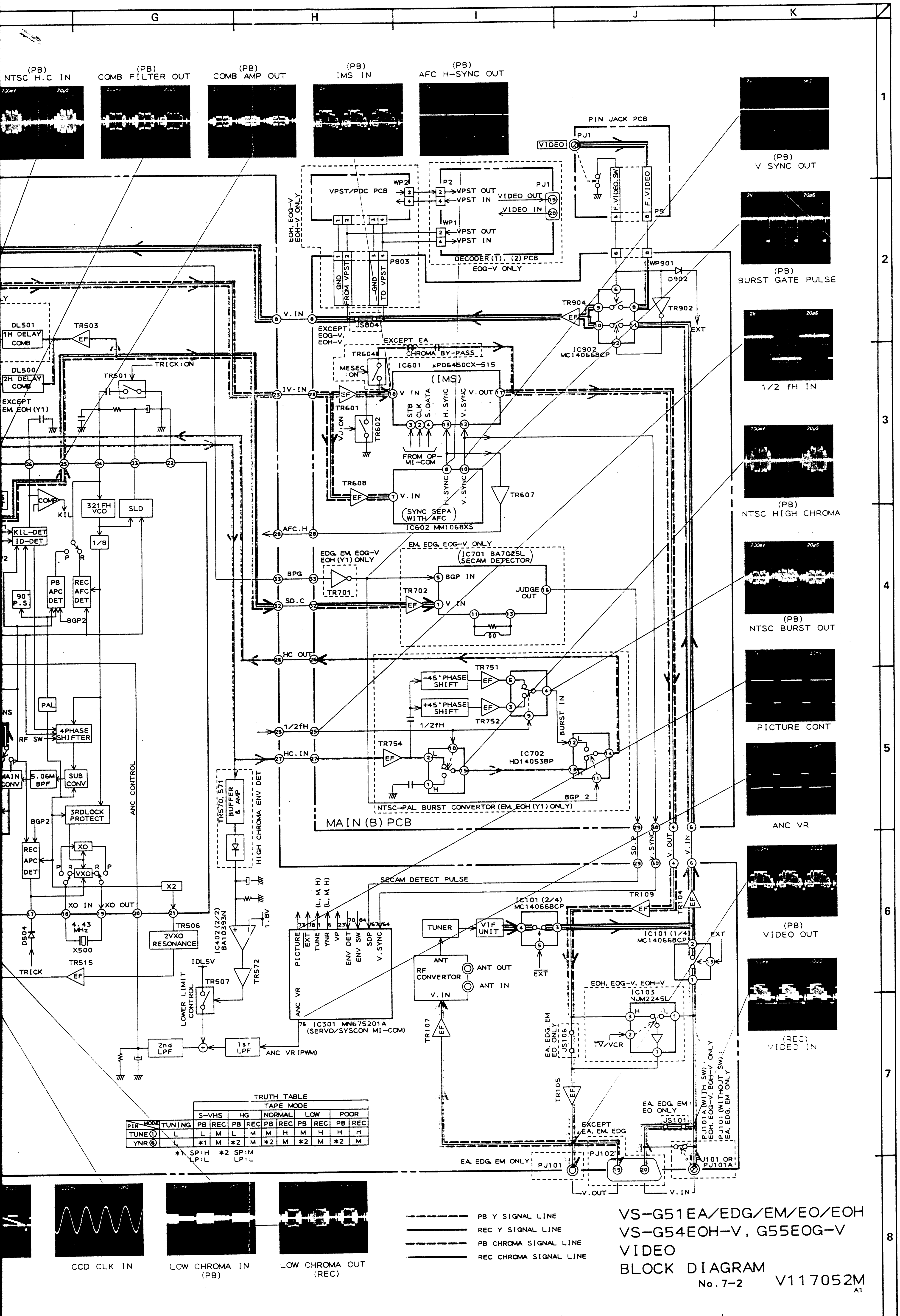

D
E
F
G
H
I
(PB) ENV SW (CUE MODE:X5)
(REC) VIDEO IN
(PB) VIDEO OUT
(REC) COMPOSITE SYNC
(PB) NTSC H.C IN
(PB) COMB FILTER OUT
(PB) COMB AMP OUT
(PB) IMS IN
(PB) AFC H-SYNC OUT
VIDEO
PJ1
VPST/PDC PCB
WP2
P2
VPST OUT
VPST IN
VIDEO OUT
VIDEO IN
WP1
DECODER (1), (2) PCB
EOG-V ONLY
EOH, EOG-V EOH-V ONLY
GND FROM VPST
GND TO VPST
P803
IC301 ENV SW
EM, EOH (Y1) ONLY
NTSC:ON
NTSC:OFF
TR505
DL501 1H DELAY COMB
TR503
DL500 2H DELAY COMB
TR504
JS501
EXCEPT EM, EOH (Y1)
TRICK:ON
TR501
VP (FROM IC301 23)
C.SYNC (TO OPE.MI-COM)
VR401
EE LEVEL
IDL 5V
VCC1
VIDEO AMP
QV/QHINS CHAR INS W/D CLIP
4.2V REG
AMP 9dB
P/S DET
COMP
321FH VCO
SLD
AGC DET
VIDEO AGC
FBC
PAL SEC
ATT -1dB
Y/C MIX
PB AMP B.DEEM KILLER
KIL
BGP1
4.43 BPF
MES
KIL-DET ID-DET
BGP2
1/8
PB APC DET
REC AFC DET
90° P.S.
CLAMP
LPF
6dB
SYNC SEP
DELAY
COMB DRIVER AMP PAL 11dB NT 5dB
PICTURE CONTROL
HALF H. KILLER
BGP GEN
1/2
NL DE EMPH
WHP NOICAN
DOC
CORR
LIM
K
B.G.
LP
SP
ACC DET
375NS
4.43M BPF
PAL
4PHASE SHIFTER
RF SW
ACC. D AMP
BURST EMPH
MAIN CONV
5.06M BPF
SUB CONV
BALANCER
3RDLOCK PROTECT
XO
VXO
ANC CONTROL
1MHZ LPF
REC APC DET
W/D CLIP
MAIN EMPH
NL EMPH
DETAIL EN-1
VCA
ATT
EQ
SP.ON
TR413
TR408
PB:ON
REC/PB CONT
D406
IDL5V
TR471
2VXO TRAP
TR421
YNR
TR470
CCD 1H DELAY
IC401 LC8992
LPF
TR423 PICTURE CONTROL
*TR421 ON:LNC/YNR→OFF OFF:LNC/YNR→ON
CLK
TRICK
D504
XO IN
XO OUT
4.43 MHz X500
TR515
X2
TR506
2VXO RESONANCE
TR570, 571 BUFFER & AMP
HIGH CHROMA ENV DET
IC402 (2/2) BA10393N
TR572
1.8V
TR507
LOWER LIMIT CONTROL
2nd LPF
1st LPF
ANC VR (PWM)
V. IN
IV. IN
AFC. H
BPG
SD. C
HC OUT
1/2fH
HC. IN
EXCEPT EOG-V, EOH-V
JS804
EXCEPT EA
CHROMA BY-PASS
TR604
MESEC :ON
IC601 μPD6450CX-515
(IMS)
V. IN
V. OUT
STB CLK S.DATA H.SYNC V.SYNC
TR601
VJ:ON
TR602
FROM OP-MI-COM
TR608
TR607
(SYNC SEPA WITH AFC)
IC602 MM1068XS
TR904
IC902 MC14066B
EM, EDG, EOG-V ONLY
IC701 BA7025L (SECAM DETECTOR)
EDG, EM, EOG-V EOH (Y1) ONLY
TR701
BGP IN
JUDGE OUT
TR702
V IN
TR751
-45° PHASE SHIFT
+45° PHASE SHIFT
TR752
BURST IN
TR754
IC702 HD14053BP
BGP 2
NTSC→PAL BURST CONVERTOR (EM, EOH (Y1) ONLY)
MAIN (B) PCB
SECAM DETECT PULSE
(L, M, H)
PICTURE EXT TUNE YNR VP ENV DET ENV SW SDP V.SYNC
ANC VR
IC301 MN675201A (SERVO/SYSCON MI-COM)
TUNER
VIF UNIT
IC101 (2/4) MC14066BCP
EXT
ANT
RF CONVERTOR
V. IN
ANT OUT
ANT IN
TR107
EA, EDG, EM EO ONLY JS106
TR105
EA, EDG, EM ONLY
PJ101
V. OU
IN
CHROMA TRAP OUT (REC)
MAIN EMPHA OUT (REC)
CCD OUT (PB)
CCD IN (PB)
CCD CLK IN
LOW CHROMA IN (PB)
LOW CHROMA OUT (REC)

TRUTH TABLE

PIN \ MODE	TUNING	S-VHS		HG		NORMAL		LOW		POOR	
		TAPE MODE									
		PB	REC	PB	REC	PB	REC	PB	REC	PB	REC
TUNE ①	L	L	M	L	M	M	H	M	H	H	H
YNR ⑥	L	*1	M	*2	M	*2	M	*2	M	*2	M

*1 SP:H LP:L
*2 SP:M LP:L

PB Y SIGNAL LINE
REC Y SIGNAL LINE
PB CHROMA SIGNAL LINE
REC CHROMA SIGNAL LINE


G
H
I
J
K
1
2
3
4
5
6
7
8
(PB) NTSC H.C IN
(PB) COMB FILTER OUT
(PB) COMB AMP OUT
(PB) IMS IN
(PB) AFC H-SYNC OUT
(PB) V SYNC OUT
(PB) BURST GATE PULSE
1/2 fH IN
(PB) NTSC HIGH CHROMA
(PB) NTSC BURST OUT
PICTURE CONT
ANC VR
(PB) VIDEO OUT
(REC) VIDEO IN
CCD CLK IN
LOW CHROMA IN (PB)
LOW CHROMA OUT (REC)
PIN JACK PCB
VIDEO
PJ1
F.VIDEO.SW
F.VIDEO
P5
VPST/PDC PCB
WP2
P2
VPST OUT
VPST IN
VIDEO OUT
VIDEO IN
WP1
DECODER (1), (2) PCB
EOG-V ONLY
EOH, EOG-V EOH-V ONLY
GND
FROM VPST
TO VPST
P803
WP901
D902
TR904
TR902
EXT
IC902 MC14066BCP
V.IN
EXCEPT EOG-V, EOH-V
JS804
EXCEPT EA
CHROMA BY-PASS
TR604
MESEC :ON
IC601 μPD6450CX-515
(IMS)
V.OUT
IV.IN
TR601
VJ:ON
TR602
STB
CLK
S.DATA
H.SYNC
V.SYNC
FROM OP-MI-COM
TR608
TR607
(SYNC SEPA WITH AFC)
IC602 MM1068XS
AFC.H
EDG, EM, EOG-V EOH (Y1) ONLY
EM, EDG, EOG-V ONLY
IC701 BA7025L (SECAM DETECTOR)
BGP
BGP IN
TR701
TR702
JUDGE OUT
SD.C
HC OUT
TR751
-45° PHASE SHIFT
+45° PHASE SHIFT
TR752
BURST IN
1/2fH
TR754
IC702 HD14053BP
HC.IN
BGP 2
NTSC→PAL BURST CONVERTOR (EM, EOH (Y1) ONLY)
MAIN (B) PCB
SD.P
V.SYNC
DL501 1H DELAY COMB
DL500 2H DELAY COMB
TR503
EXCEPT EM, EOH (Y1)
TR501
TRICK:ON
COMP
KIL
KIL-DET
ID-DET
321FH VCO
SLD
1/8
P
R
PB APC DET
REC AFC DET
90° P.S.
8GP2
PAL
RF SW
4PHASE SHIFTER
MAIN CONV
5.06M BPF
SUB CONV
3RDLOCK PROTECT
BGP2
REC APC DET
XO
VXO
X2
XO IN
XO OUT
4.43 MHz
X500
D504
TRICK
TR515
TR506
2VXO RESONANCE
ANC CONTROL
TR570, 571 BUFFER & AMP
HIGH CHROMA ENV DET
IC402 (2/2) BA10393N
1.8V
TR572
IDL5V
TR507
LOWER LIMIT CONTROL
2nd LPF
1st LPF
ANC VR (PWM)
SECAM DETECT PULSE
(L, M, H)
PICTURE
EXT
TUNE
YNR
VP
ENV DET
ENV SW
SDP
V.SYNC
ANC VR
IC301 MN675201A (SERVO/SYSCON MI-COM)
TUNER
VIF UNIT
IC101 (2/4) MC14066BCP
ANT
RF CONVERTOR
ANT OUT
ANT IN
TR107
TR109
TR104
IC101 (1/4) MC14066BCP
EOH, EOG-V, EOH-V
IC103 NJM2245L
TV/VCR
EA, EDG, EM EO ONLY
JS106
TR105
EXCEPT EA, EM, EDG
EA, EDG, EM EO ONLY
JS101
PJ101A (WITH SW) EOH, EOG-V, EOH-V ONLY
PJ101 (WITHOUT SW) EA, EDG, EM ONLY
EA, EDG, EM ONLY
PJ101
PJ102
PJ101 OR PJ101A
V.OUT
V.IN

TRUTH TABLE

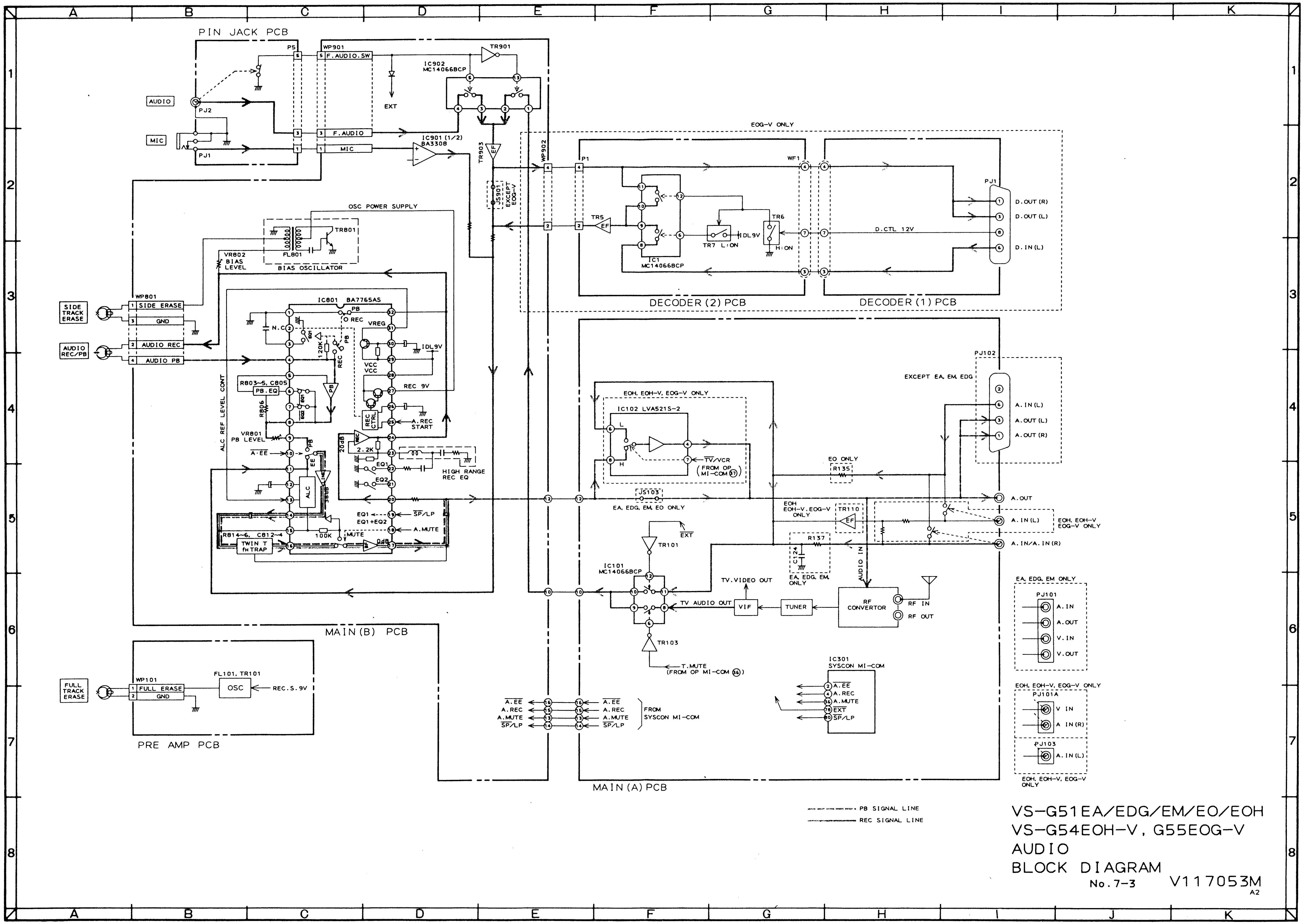
PIN \ MODE	TUNING	TAPE MODE									
		S-VHS		HG		NORMAL		LOW		POOR	
		PB	REC	PB	REC	PB	REC	PB	REC	PB	REC
TUNE ①	L	L	M	L	M	M	H	M	H	H	H
YNR ⑥	L	*1	M	*2	M	*2	M	*2	M	*2	M

*1 SP:H
LP:L

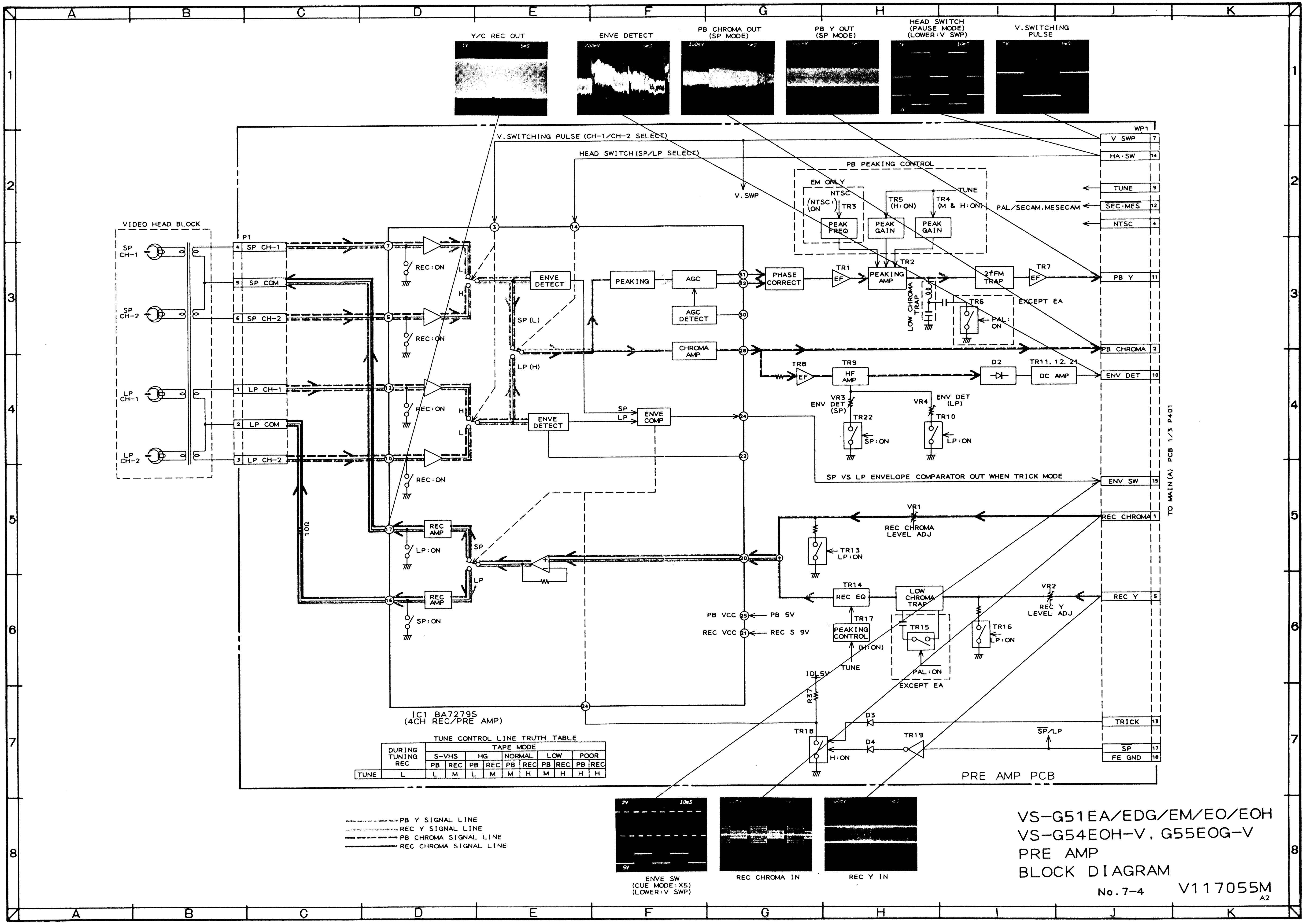
*2 SP:M
LP:L

- - - - - - PB Y SIGNAL LINE
—————— REC Y SIGNAL LINE
▬ ▬ ▬ ▬ PB CHROMA SIGNAL LINE
▬▬▬▬▬ REC CHROMA SIGNAL LINE

VS-G51EA/EDG/EM/EO/EOH
VS-G54EOH-V, G55EOG-V
VIDEO
BLOCK DIAGRAM
No.7-2
V117052M
A1


PIN JACK PCB
AUDIO
PJ2
MIC
PJ1
P5
WP901
F. AUDIO. SW
F. AUDIO
MIC
TR901
IC902
MC14066BCP
EXT
IC901 (1/2)
BA3308
TR903
EF
JS901
EXCEPT
EOG-V
WP902
EOG-V ONLY
P1
WF1
TR5
TR6
TR7 L: ON
H: ON
IDL9V
IC1
MC14066BCP
PJ1
D. OUT (R)
D. OUT (L)
D. CTL 12V
D. IN (L)
DECODER (2) PCB
DECODER (1) PCB
OSC POWER SUPPLY
TR801
FL801
BIAS OSCILLATOR
VR802
BIAS
LEVEL
SIDE
TRACK
ERASE
WP801
SIDE ERASE
GND
AUDIO
REC/PB
AUDIO REC
AUDIO PB
IC801 BA7765AS
PB
REC
VREG
N.C
120K
IDL9V
VCC
REC 9V
REC CTRL
A. REC
START
R803-5, C805
PB. EQ
R806
VR801
PB LEVEL
ALC REF LEVEL CONT
A·EE
EE
LINE
ALC
20dB
2.2K
EQ1
EQ2
HIGH RANGE
REC EQ
EQ1
EQ1+EQ2
SP/LP
A. MUTE
MUTE
100K
0dB
R814-6, C812-4
TWIN T
fH TRAP
MAIN (B) PCB
PJ102
EXCEPT EA, EM, EDG
A. IN (L)
A. OUT (L)
A. OUT (R)
EOH, EOH-V, EOG-V ONLY
IC102 LVA521S-2
L
H
TV/VCR
(FROM OP MI-COM ㊲)
EO ONLY
R135
JS103
EA, EDG, EM, EO ONLY
A. OUT
EOH
EOH-V, EOG-V
ONLY
TR110
EF
A. IN (L)
EOH, EOH-V
EOG-V ONLY
A. IN/A. IN (R)
R137
C124
EA, EDG, EM
ONLY
AUDIO IN
EXT
TR101
IC101
MC14066BCP
TV. VIDEO OUT
TV AUDIO OUT
VIF
TUNER
RF
CONVERTOR
RF IN
RF OUT
TR103
T. MUTE
(FROM OP MI-COM ㊱)
IC301
SYSCON MI-COM
A. EE
A. REC
A. MUTE
EXT
SP/LP
FROM
SYSCON MI-COM
MAIN (A) PCB
FULL
TRACK
ERASE
WP101
FULL ERASE
GND
FL101, TR101
OSC
REC. S. 9V
PRE AMP PCB
EA, EDG, EM ONLY
PJ101
A. IN
A. OUT
V. IN
V. OUT
EOH, EOH-V, EOG-V ONLY
PJ101A
V IN
A IN (R)
PJ103
A. IN (L)
EOH, EOH-V, EOG-V
ONLY
PB SIGNAL LINE
REC SIGNAL LINE
A
B
C
D
E
F
G
H
I
J
K
1
2
3
4
5
6
7
8

VS-G51EA/EDG/EM/EO/EOH
VS-G54EOH-V, G55EOG-V
AUDIO
BLOCK DIAGRAM
No. 7-3 V117053M
A2



Y/C REC OUT
ENVE DETECT
PB CHROMA OUT (SP MODE)
PB Y OUT (SP MODE)
HEAD SWITCH (PAUSE MODE) (LOWER:V SWP)
V.SWITCHING PULSE
WP1
V.SWITCHING PULSE (CH-1/CH-2 SELECT)
HEAD SWITCH (SP/LP SELECT)
V.SWP
PB PEAKING CONTROL
EM ONLY
NTSC
(NTSC: ON)
TR3
TR5 (H:ON)
TR4 (M & H:ON)
TUNE
PEAK FREQ
PEAK GAIN
PEAK GAIN
PAL/SECAM.MESECAM
VIDEO HEAD BLOCK
SP CH-1
SP CH-2
LP CH-1
LP CH-2
P1
SP CH-1
SP COM
SP CH-2
LP CH-1
LP COM
LP CH-2
REC:ON
L
H
SP (L)
LP (H)
ENVE DETECT
PEAKING
AGC
AGC DETECT
CHROMA AMP
SP
LP
ENVE COMP
PHASE CORRECT
TR1
EF
PEAKING AMP
TR2
LOW CHROMA TRAP
TR6
PAL: ON
EXCEPT EA
2fFM TRAP
TR7
EF
TR8
EF
TR9
HF AMP
D2
TR11, 12, 21
DC AMP
VR3
ENV DET (SP)
TR22
SP:ON
VR4
ENV DET (LP)
TR10
LP:ON
SP VS LP ENVELOPE COMPARATOR OUT WHEN TRICK MODE
10Ω
REC AMP
LP:ON
SP
LP
REC AMP
SP:ON
VR1
REC CHROMA LEVEL ADJ
TR13
LP:ON
TR14
REC EQ
TR17
PEAKING CONTROL
(H:ON)
TUNE
LOW CHROMA TRAP
TR15
PAL:ON
EXCEPT EA
VR2
REC Y LEVEL ADJ
TR16
LP:ON
PB VCC
PB 5V
REC VCC
REC S 9V
IDL 5V
R37
D3
D4
TR18
H:ON
TR19
SP/LP
IC1 BA7279S
(4CH REC/PRE AMP)
V SWP 7
HA·SW 14
TUNE 9
SEC·MES 12
NTSC 4
PB Y 11
PB CHROMA 2
ENV DET 10
ENV SW 15
REC CHROMA 1
REC Y 5
TRICK 13
SP 17
FE GND 18
TO MAIN(A) PCB 1/3 P401
PRE AMP PCB
ENVE SW (CUE MODE:X5) (LOWER:V SWP)
REC CHROMA IN
REC Y IN

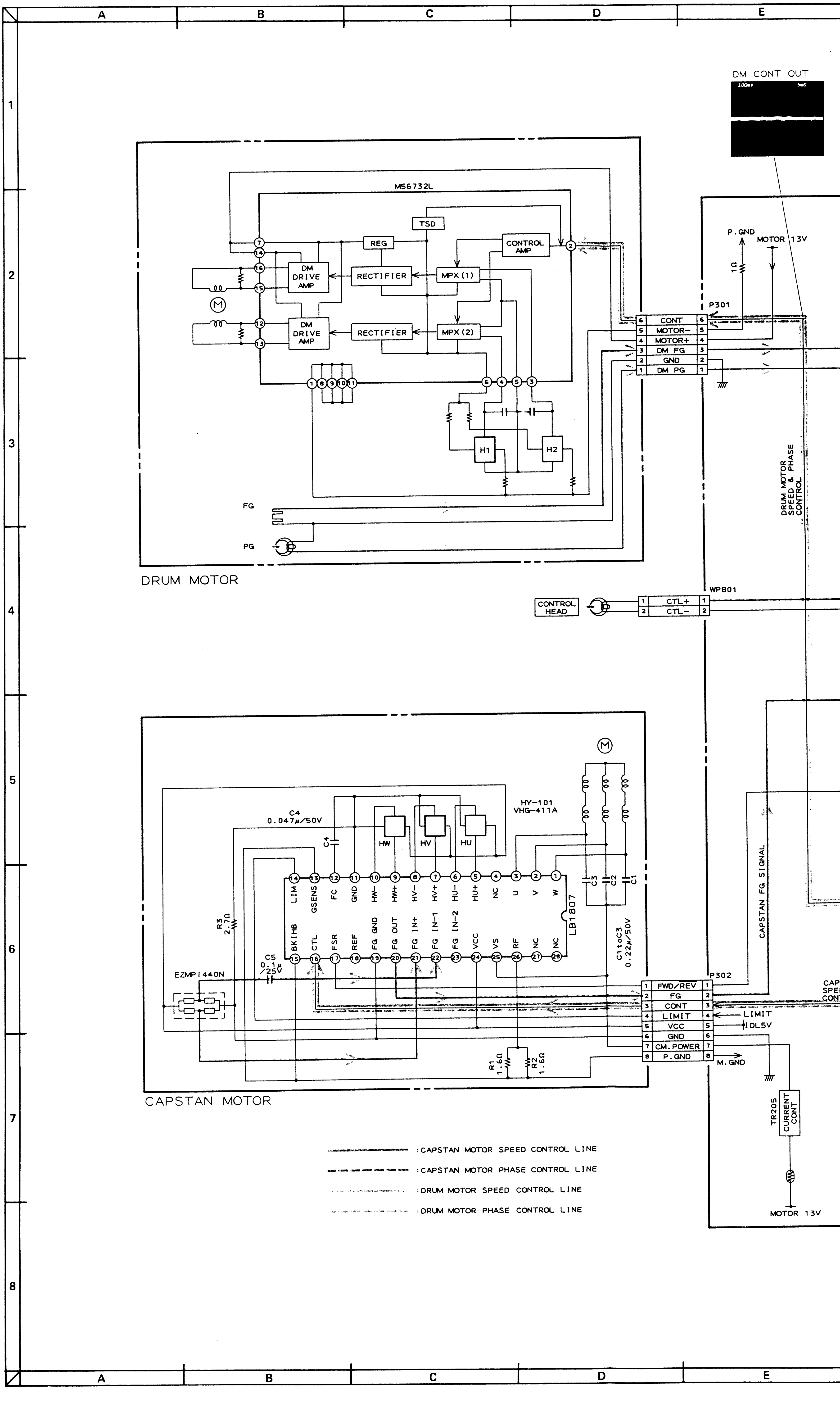
TUNE CONTROL LINE TRUTH TABLE

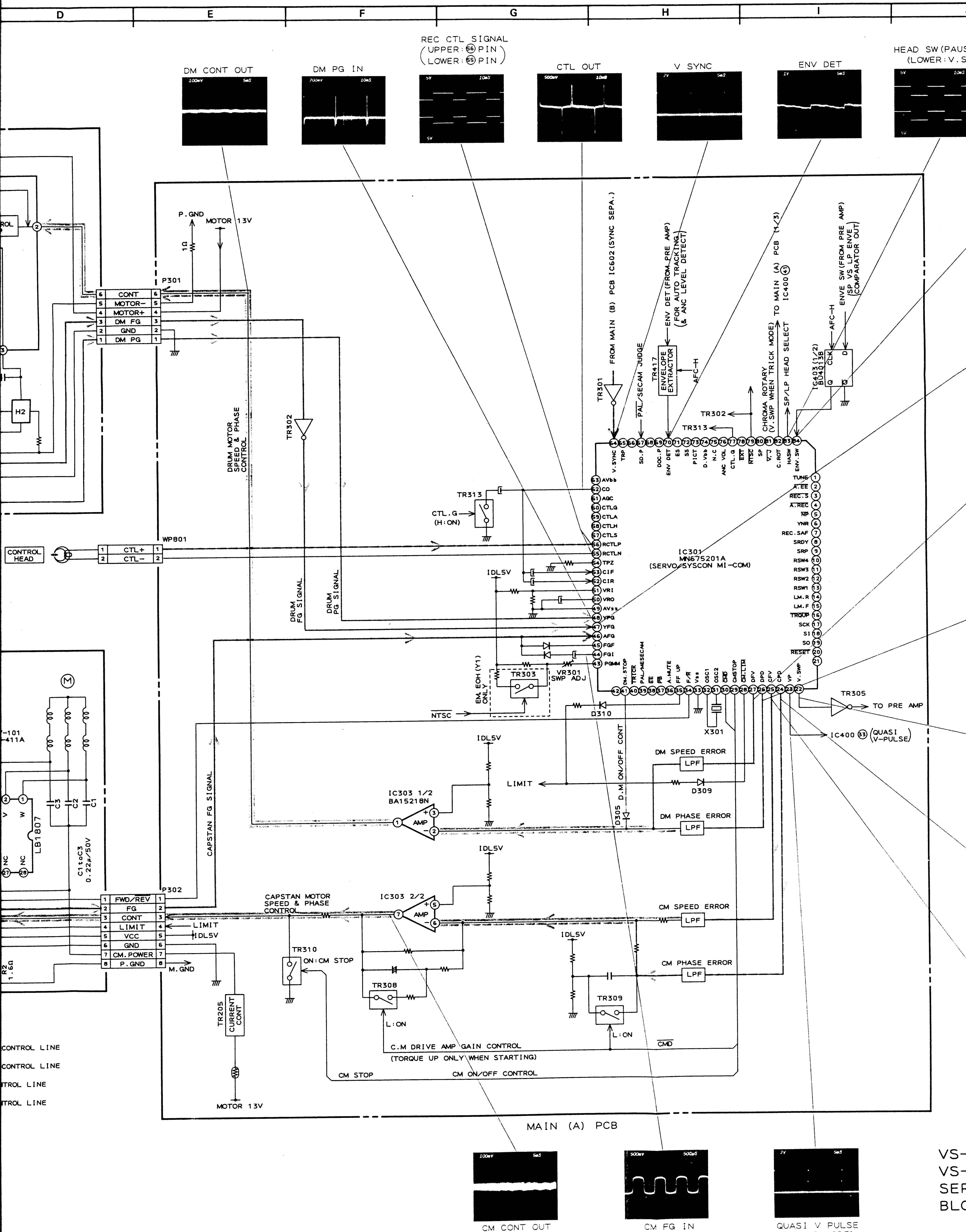
	DURING TUNING REC	TAPE MODE									
		S-VHS		HG		NORMAL		LOW		POOR	
		PB	REC	PB	REC	PB	REC	PB	REC	PB	REC
TUNE	L	L	M	L	M	M	H	M	H	H	H

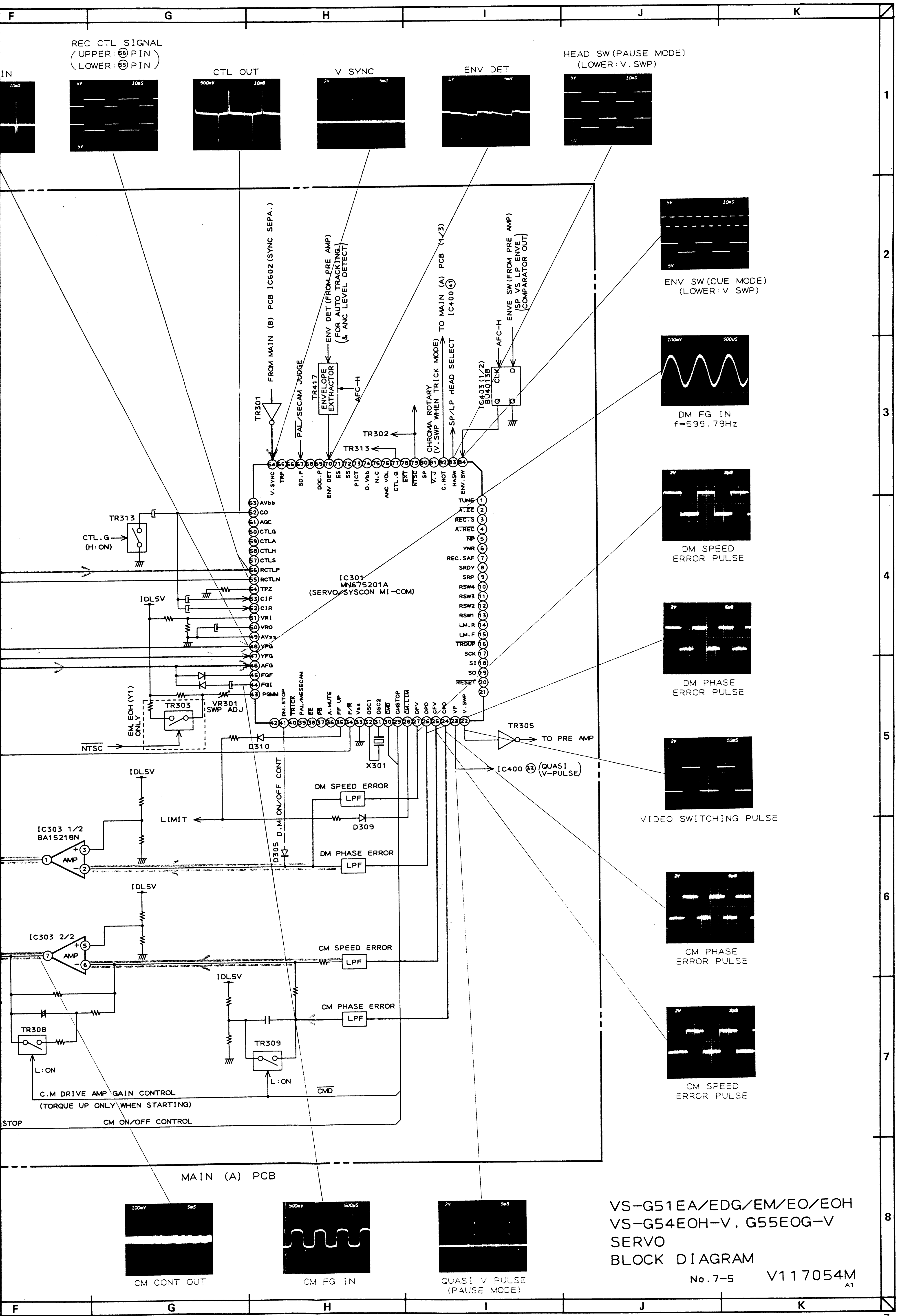
- PB Y SIGNAL LINE
- REC Y SIGNAL LINE
- PB CHROMA SIGNAL LINE
- REC CHROMA SIGNAL LINE

VS-G51EA/EDG/EM/EO/EOH
VS-G54EOH-V, G55EOG-V
PRE AMP
BLOCK DIAGRAM

No.7-4 V117055M A2

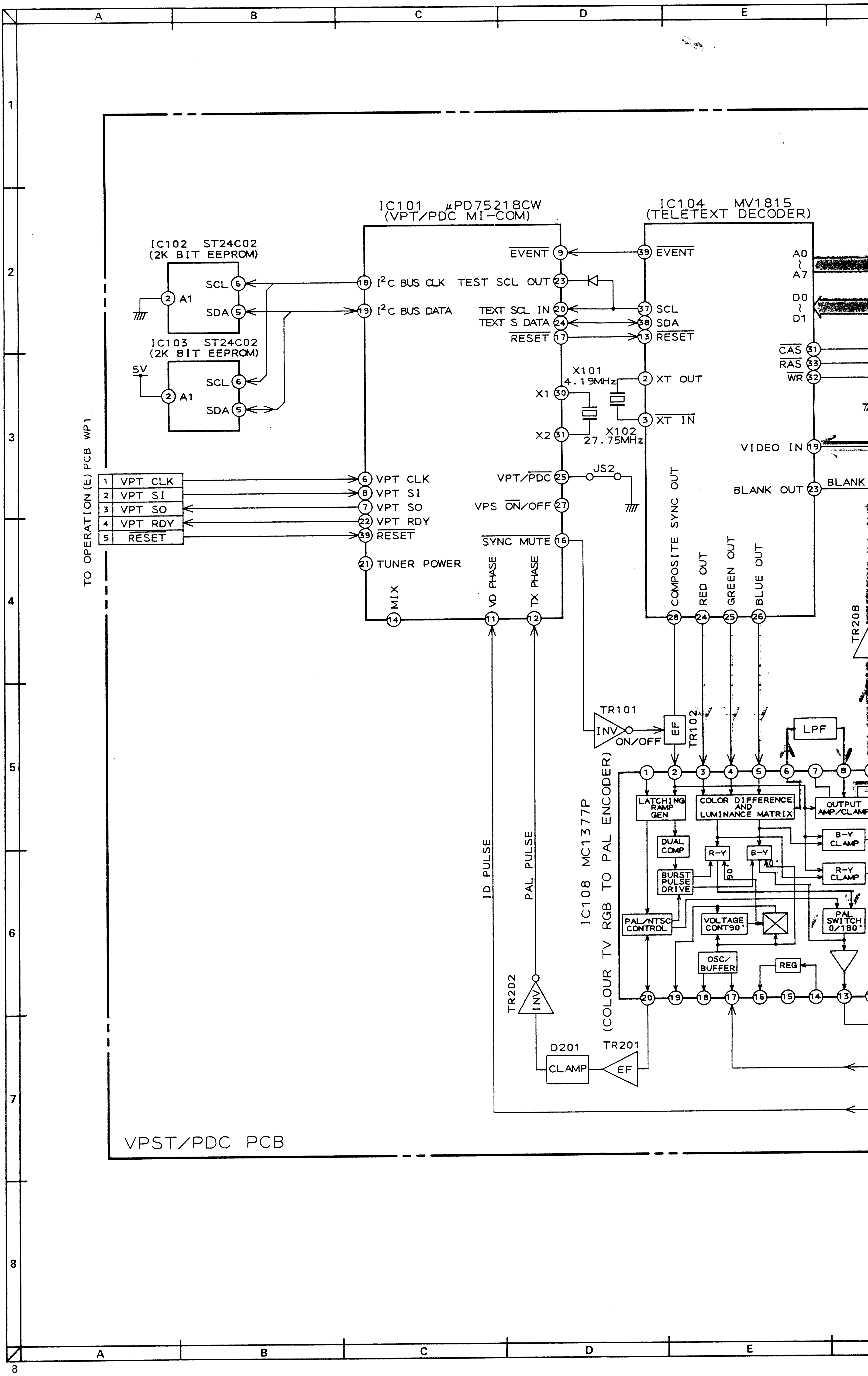

A
B
C
D
E
1
2
3
4
5
6
7
8
DM CONT OUT
100mV
5mS
M56732L
TSD
REG
CONTROL AMP
DM DRIVE AMP
RECTIFIER
MPX (1)
MPX (2)
H1
H2
FG
PG
DRUM MOTOR
P.GND
MOTOR 13V
1Ω
P301
6 CONT 6
5 MOTOR− 5
4 MOTOR+ 4
3 DM FG 3
2 GND 2
1 DM PG 1
DRUM MOTOR SPEED & PHASE CONTROL
CONTROL HEAD
WP801
1 CTL+ 1
2 CTL− 2
HY-101
VHG-411A
C4 0.047μ/50V
HW
HV
HU
LIM
GSENS
FC
GND
HW−
HW+
HV−
HV+
HU−
HU+
NC
U
V
W
BKIHB
CTL
FSR
REF
FG GND
FG OUT
FG IN+
FG IN−1
FG IN−2
VCC
VS
RF
LB1807
R3 2.7Ω
C5 0.1μ /25V
EZMP1440N
C1toC3 0.22μ/50V
C3
C2
C1
R1 1.6Ω
R2 1.6Ω
P302
1 FWD/REV 1
2 FG 2
3 CONT 3
4 LIMIT 4
5 VCC 5
6 GND 6
7 CM.POWER 7
8 P.GND 8
LIMIT
IDL5V
M.GND
CAPSTAN FG SIGNAL
CAP SPE CONT
TR205 CURRENT CONT
MOTOR 13V
CAPSTAN MOTOR
:CAPSTAN MOTOR SPEED CONTROL LINE
:CAPSTAN MOTOR PHASE CONTROL LINE
:DRUM MOTOR SPEED CONTROL LINE
:DRUM MOTOR PHASE CONTROL LINE

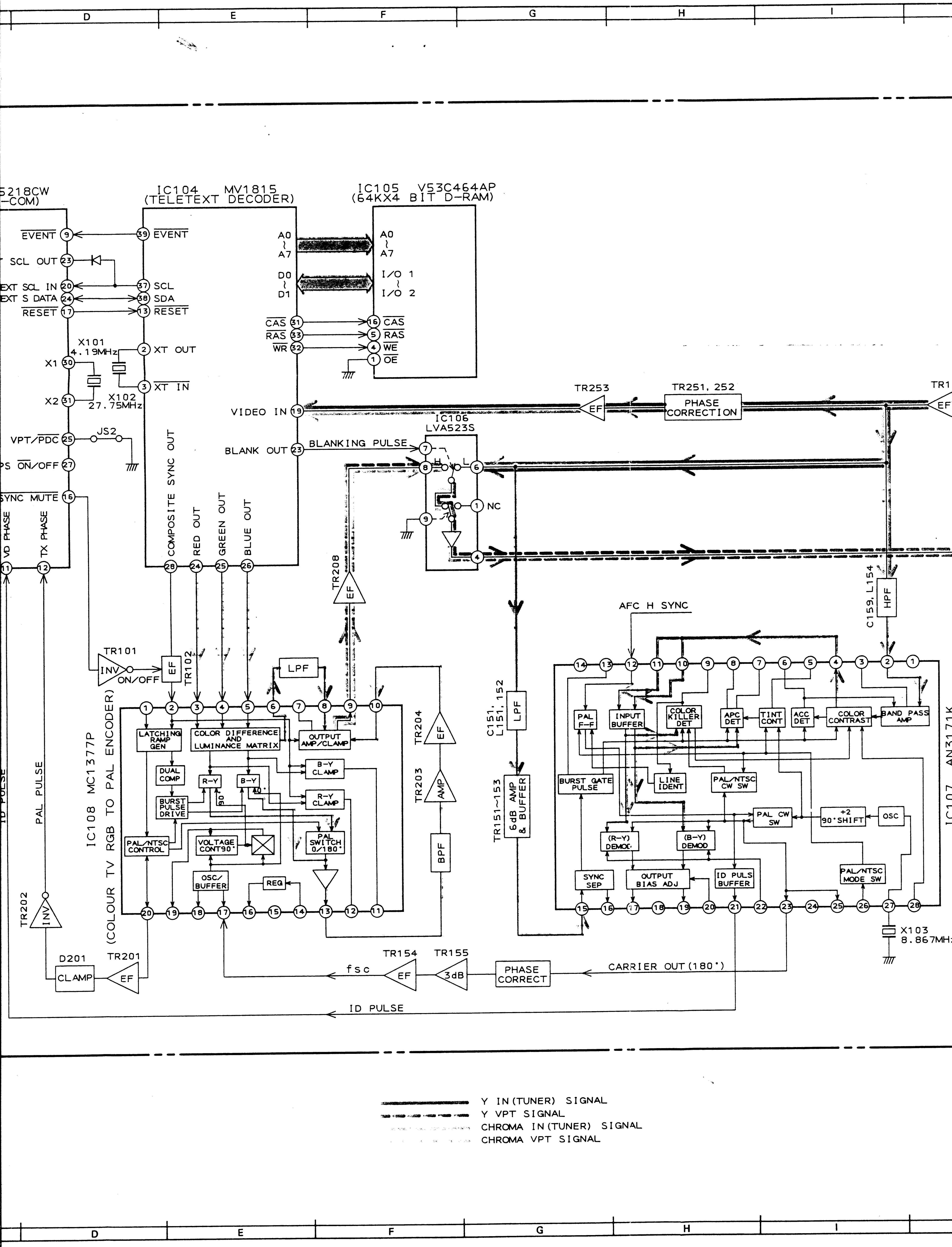

D
E
F
G
H
I
DM CONT OUT
DM PG IN
REC CTL SIGNAL (UPPER: ㊱ PIN LOWER: ㊰ PIN)
CTL OUT
V SYNC
ENV DET
HEAD SW (PAUS
(LOWER: V.S
P.GND
MOTOR 13V
1Ω
P301
CONT
MOTOR−
MOTOR+
DM FG
GND
DM PG
H2
DRUM MOTOR SPEED & PHASE CONTROL
TR302
TR301
FROM MAIN (B) PCB IC602 (SYNC SEPA.)
PAL/SECAM JUDGE
TR417
ENVELOPE EXTRACTOR
AFC−H
ENV DET (FROM PRE AMP) (FOR AUTO TRACKING & ANC LEVEL DETECT)
TR302
TR313
CHROMA ROTARY (V.SWP WHEN TRICK MODE)
TO MAIN (A) PCB IC400 ④1 (1/3)
SP/LP HEAD SELECT
IC403 (1/2) BU4013B
CLK
D
Q
AFC−H
ENVE SW (FROM PRE AMP) (SP VS LP ENVE COMPARATOR OUT)
V.SYNC TRP SD.P DOC.P ENV DET ES SS PICT D.Vbb N.C ANC VOL CTL.G EXT NTSC SP V.J C.ROT HASW ENV.SW
AVbb CO AGC CTLG CTLA CTLH CTLS RCTLP RCTLN TPZ CIF CIR VRI VRO AVss YPG YFG AFG FGF FGI PGMM
TUNE A.EE REC.S A.REC NP YNR REC.SAF SRDY SRP RSW4 RSW3 RSW2 RSW1 LM.R LM.F TRQUP SCK SI SO RESET
DM.STOP TRTCR PAL/MESECAM EE PB A.MUTE FF UP F/R Vss OSC1 OSC2 CMD CMSTOP CM.LTM DFV DPD CFV CPD VP V.SWP
IC301 MN675201A (SERVO/SYSCON MI−COM)
TR313
CTL.G (H:ON)
WP801
CONTROL HEAD
CTL+
CTL−
IDL5V
DRUM FG SIGNAL
DRUM PG SIGNAL
EM, EOH (Y1) ONLY
TR303
VR301 SWP ADJ
NTSC
D310
X301
TR305
TO PRE AMP
IC400 ㉝ (QUASI V-PULSE)
-101
-411A
M
C3
C2
C1
V
W
LB1807
NC
C1toC3 0.22μ/50V
CAPSTAN FG SIGNAL
IDL5V
LIMIT
IC303 1/2 BA15218N
AMP
D.M ON/OFF CONT
D305
DM SPEED ERROR
LPF
D309
DM PHASE ERROR
IDL5V
P302
FWD/REV
FG
CONT
LIMIT
VCC
GND
CM.POWER
P.GND
LIMIT
IDL5V
M.GND
R2 1.6Ω
CAPSTAN MOTOR SPEED & PHASE CONTROL
IC303 2/2
CM SPEED ERROR
TR310
ON: CM STOP
TR308
L:ON
IDL5V
CM PHASE ERROR
TR309
L:ON
CMD
C.M DRIVE AMP GAIN CONTROL
(TORQUE UP ONLY WHEN STARTING)
CM STOP
CM ON/OFF CONTROL
TR205
CURRENT CONT
MOTOR 13V
CONTROL LINE
CONTROL LINE
TROL LINE
TROL LINE
MAIN (A) PCB
CM CONT OUT
CM FG IN
QUASI V PULSE (PAUSE MODE)
VS-
VS-
SER
BLO


F
G
H
I
J
K
1
2
3
4
5
6
7
8
IN
REC CTL SIGNAL
(UPPER: ㊻ PIN)
(LOWER: ㊺ PIN)
CTL OUT
V SYNC
ENV DET
HEAD SW (PAUSE MODE)
(LOWER: V. SWP)
ENV SW (CUE MODE)
(LOWER: V SWP)
DM FG IN
f=599.79Hz
DM SPEED
ERROR PULSE
DM PHASE
ERROR PULSE
VIDEO SWITCHING PULSE
CM PHASE
ERROR PULSE
CM SPEED
ERROR PULSE
CM CONT OUT
CM FG IN
QUASI V PULSE
(PAUSE MODE)
FROM MAIN (B) PCB IC602 (SYNC SEPA.)
TR301
PAL/SECAM JUDGE
TR417
ENVELOPE EXTRACTOR
AFC-H
ENV DET (FROM PRE AMP)
(FOR AUTO TRACKING & ANC LEVEL DETECT)
TO MAIN (A) PCB (1/3) IC400 ④
TR302
TR313
CHROMA ROTARY
(V.SWP WHEN TRICK MODE)
SP/LP HEAD SELECT
IC403 (1/2)
BU4013B
CLK
D
Q
AFC-H
ENVE SW (FROM PRE AMP)
(SP VS LP ENVE COMPARATOR OUT)
V.SYNC
TRP
SD.P
DOC.P
ENV DET
ES
SS
PICT
D.Vdd
N.C
ANC VOL
CTL.G
EXT
NTSC
SP
V.J
C.ROT
HASW
ENV.SW
TUNE
A.EE
REC.S
A.REC
NP
YNR
REC.SAF
SRDY
SRP
RSW4
RSW3
RSW2
RSW1
LM.R
LM.F
TRQUP
SCK
SI
SO
RESET
AVdd
CO
AGC
CTLG
CTLA
CTLH
CTLS
RCTLP
RCTLN
TPZ
CIF
CIR
VRI
VRO
AVss
YFG
YFG
AFG
FGF
FGI
PGMM
IC301
MN675201A
(SERVO/SYSCON MI-COM)
TR313
CTL.G
(H: ON)
IDL5V
EM, EOH (Y1) ONLY
TR303
VR301
SWP ADJ
NTSC
DM.STOP
TRICR
PAL/MESECAM
EE
PB
A.MUTE
FF UP
F/R
Vss
OSC1
OSC2
CMD
CMSTOP
CM.LIM
DFV
DPD
CFV
CPD
VP
V.SWP
X301
D310
TR305
TO PRE AMP
IC400 ㊸ (QUASI V-PULSE)
IDL5V
D.M ON/OFF CONT
DM SPEED ERROR
LPF
LIMIT
D309
IC303 1/2
BA15218N
AMP
D305
DM PHASE ERROR
LPF
IDL5V
IC303 2/2
AMP
CM SPEED ERROR
LPF
IDL5V
CM PHASE ERROR
LPF
TR308
L: ON
TR309
L: ON
CMD
C.M DRIVE AMP GAIN CONTROL
(TORQUE UP ONLY WHEN STARTING)
STOP
CM ON/OFF CONTROL
MAIN (A) PCB

VS-G51EA/EDG/EM/EO/EOH
VS-G54EOH-V, G55EOG-V
SERVO
BLOCK DIAGRAM

No.7-5 V117054M A1


IC101 µPD75218CW
(VPT/PDC MI-COM)
IC104 MV1815
(TELETEXT DECODER)
IC102 ST24C02
(2K BIT EEPROM)
IC103 ST24C02
(2K BIT EEPROM)
SCL
SDA
A1
5V
EVENT
I²C BUS CLK
I²C BUS DATA
TEST SCL OUT
TEXT SCL IN
TEXT S DATA
RESET
X101
4.19MHz
X102
27.75MHz
X1
X2
XT OUT
XT IN
VIDEO IN
BLANK OUT
BLANK
A0 ~ A7
D0 ~ D1
CAS
RAS
WR
TO OPERATION (E) PCB WP1
1 VPT CLK
2 VPT SI
3 VPT SO
4 VPT RDY
5 RESET
VPT CLK
VPT SI
VPT SO
VPT RDY
RESET
TUNER POWER
VPT/PDC
JS2
VPS ON/OFF
SYNC MUTE
MIX
VD PHASE
TX PHASE
COMPOSITE SYNC OUT
RED OUT
GREEN OUT
BLUE OUT
TR208
TR101
INV
ON/OFF
EF
TR102
LPF
IC108 MC1377P
(COLOUR TV RGB TO PAL ENCODER)
LATCHING RAMP GEN
COLOR DIFFERENCE AND LUMINANCE MATRIX
OUTPUT AMP/CLAMP
DUAL COMP
B-Y CLAMP
R-Y
B-Y
90
0°
BURST PULSE DRIVE
R-Y CLAMP
PAL/NTSC CONTROL
VOLTAGE CONT90°
PAL SWITCH 0/180°
OSC/BUFFER
REG
ID PULSE
PAL PULSE
TR202
INV
D201
CLAMP
TR201
EF
VPST/PDC PCB
A
B
C
D
E
1
2
3
4
5
6
7
8

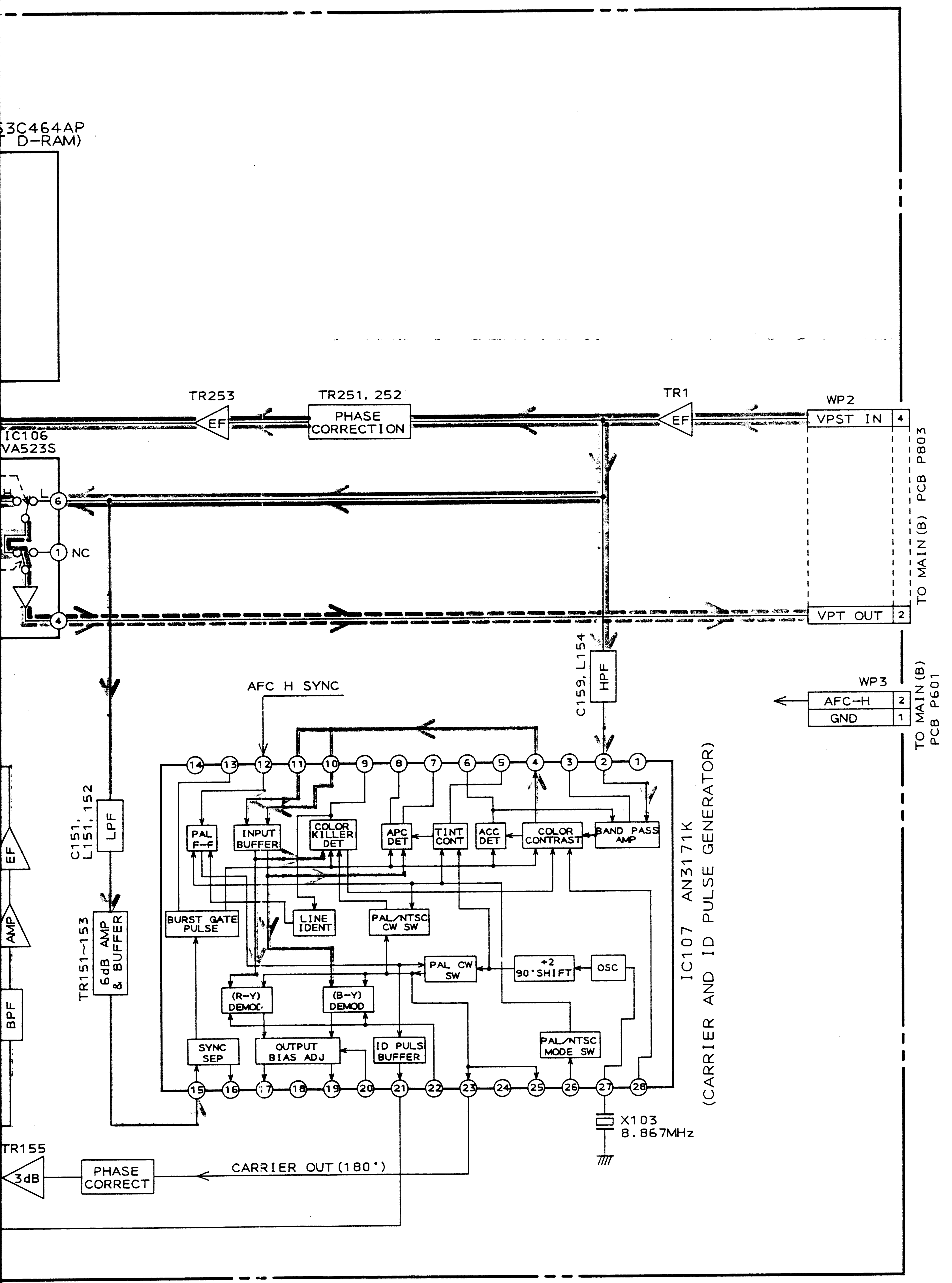

D
E
F
G
H
I
5218CW
-COM)
EVENT
SCL OUT
EXT SCL IN
EXT S DATA
RESET
X101
4.19MHz
X1
X2
X102
27.75MHz
VPT/PDC
JS2
PS ON/OFF
SYNC MUTE
VD PHASE
TX PHASE
IC104 MV1815
(TELETEXT DECODER)
EVENT
SCL
SDA
RESET
XT OUT
XT IN
VIDEO IN
BLANK OUT
COMPOSITE SYNC OUT
RED OUT
GREEN OUT
BLUE OUT
A0 ~ A7
D0 ~ D1
CAS
RAS
WR
IC105 V53C464AP
(64KX4 BIT D-RAM)
A0 ~ A7
I/O 1 ~ I/O 2
CAS
RAS
WE
OE
IC106
LVA523S
BLANKING PULSE
H
L
NC
TR253
EF
TR251, 252
PHASE CORRECTION
TR1
EF
TR208
EF
C159, L154
HPF
AFC H SYNC
TR101
INV
ON/OFF
EF
TR102
LPF
IC108 MC1377P
(COLOUR TV RGB TO PAL ENCODER)
LATCHING RAMP GEN
COLOR DIFFERENCE AND LUMINANCE MATRIX
OUTPUT AMP/CLAMP
DUAL COMP
R-Y
B-Y
90°
40°
B-Y CLAMP
R-Y CLAMP
BURST PULSE DRIVE
PAL/NTSC CONTROL
VOLTAGE CONT90°
PAL SWITCH 0/180°
OSC/BUFFER
REG
TR204
EF
TR203
AMP
BPF
C151, L151, 152
LPF
TR151~153
6dB AMP & BUFFER
IC107 AN3171K
PAL F-F
INPUT BUFFER
COLOR KILLER DET
APC DET
TINT CONT
ACC DET
COLOR CONTRAST
BAND PASS AMP
BURST GATE PULSE
LINE IDENT
PAL/NTSC CW SW
PAL CW SW
÷2 90° SHIFT
OSC
(R-Y) DEMOD
(B-Y) DEMOD
SYNC SEP
OUTPUT BIAS ADJ
ID PULS BUFFER
PAL/NTSC MODE SW
X103
8.867MHz
ID PULSE
PAL PULSE
TR202
INV
D201
CLAMP
TR201
EF
TR154
EF
TR155
3dB
fsc
PHASE CORRECT
CARRIER OUT (180°)
ID PULSE

▬▬▬ Y IN (TUNER) SIGNAL

▬ ▬ ▬ Y VPT SIGNAL

┈┈┈ CHROMA IN (TUNER) SIGNAL

┈ ┈ ┈ CHROMA VPT SIGNAL


3C464AP
D-RAM)
TR253
EF
TR251, 252
PHASE CORRECTION
TR1
EF
WP2
VPST IN
4
TO MAIN (B) PCB P803
VPT OUT
2
IC106
VA523S
H
L
6
1
NC
4
C159, L154
HPF
WP3
AFC-H
2
GND
1
TO MAIN (B) PCB P601
AFC H SYNC
14
13
12
11
10
9
8
7
6
5
4
3
2
1
PAL F-F
INPUT BUFFER
COLOR KILLER DET
APC DET
TINT CONT
ACC DET
COLOR CONTRAST
BAND PASS AMP
BURST GATE PULSE
LINE IDENT
PAL/NTSC CW SW
PAL CW SW
÷2 90°SHIFT
OSC
(R-Y) DEMOD
(B-Y) DEMOD
SYNC SEP
OUTPUT BIAS ADJ
ID PULS BUFFER
PAL/NTSC MODE SW
15
16
17
18
19
20
21
22
23
24
25
26
27
28
X103
8.867MHz
IC107 AN3171K
(CARRIER AND ID PULSE GENERATOR)
C151, L151, 152
LPF
TR151~153
6dB AMP & BUFFER
EF
AMP
BPF
TR155
3dB
PHASE CORRECT
CARRIER OUT (180°)

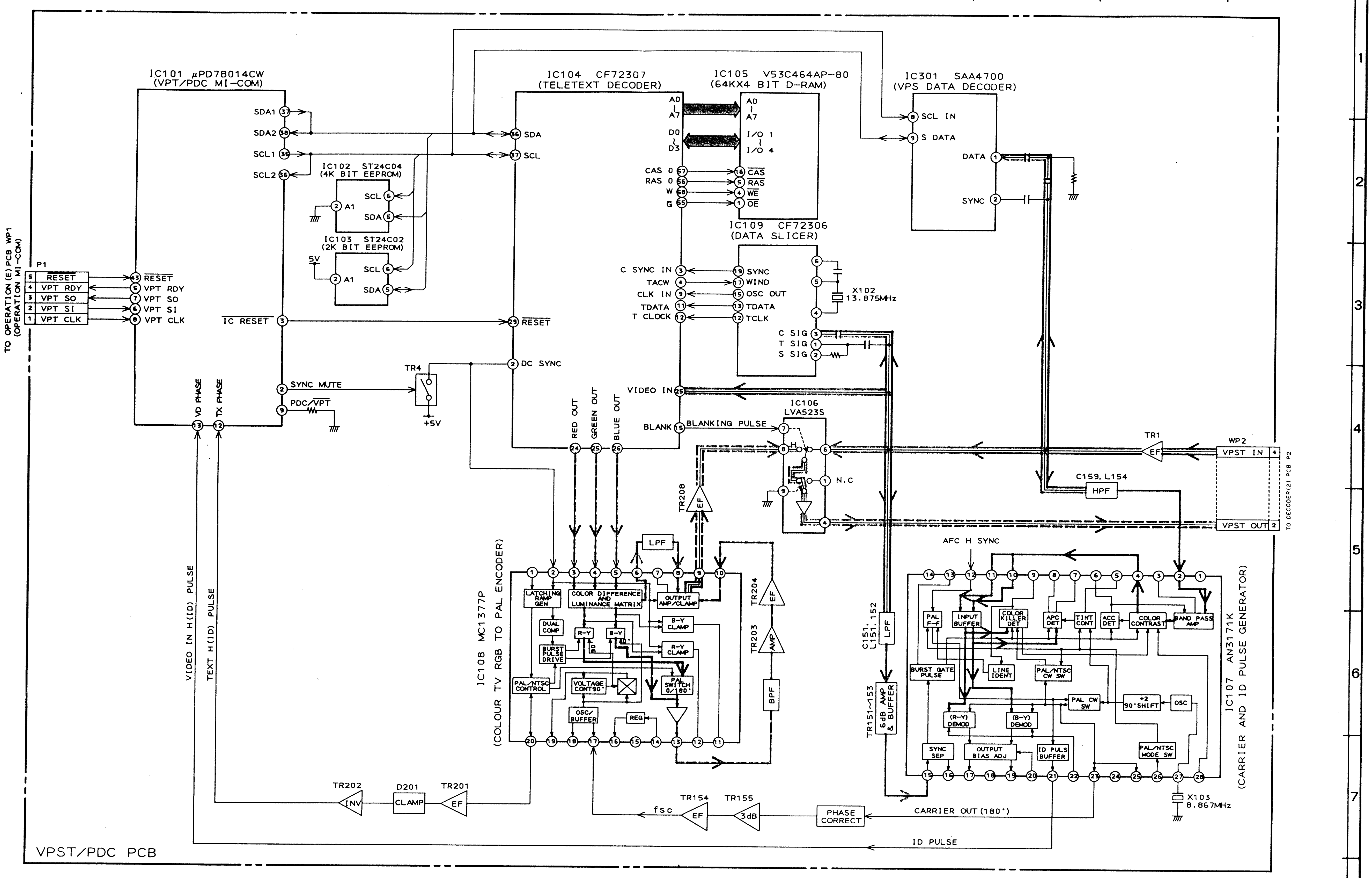
Y IN (TUNER) SIGNAL

Y VPT SIGNAL

CHROMA IN (TUNER) SIGNAL

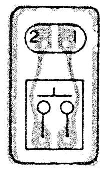
CHROMA VPT SIGNAL

VS-G54EOH-V
VPST/PDC
BLOCK DIAGRAM
No.7-6 V117056M
A2

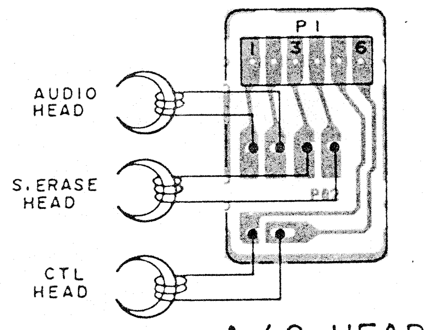

IC101 μPD78014CW
(VPT/PDC MI-COM)
SDA1 37
SDA2 38
SCL1 35
SCL2 36
43 RESET
5 VPT RDY
7 VPT SO
6 VPT SI
8 VPT CLK
IC RESET 3
2 SYNC MUTE
9 PDC/VPT
13 VD PHASE
12 TX PHASE
P1
5 RESET
4 VPT RDY
3 VPT SO
2 VPT SI
1 VPT CLK
TO OPERATION(E)PCB WP1
(OPERATION MI-COM)
IC102 ST24C04
(4K BIT EEPROM)
IC103 ST24C02
(2K BIT EEPROM)
A1
SCL
SDA
5V
TR4
+5V
IC104 CF72307
(TELETEXT DECODER)
36 SDA
37 SCL
29 RESET
2 DC SYNC
A0 ~ A7
D0 ~ D3
CAS 0 57
RAS 0 56
W 58
G 55
C SYNC IN 3
TACW 4
CLK IN 9
TDATA 11
T CLOCK 12
VIDEO IN 25
BLANK 15
RED OUT 24
GREEN OUT 25
BLUE OUT 26
IC105 V53C464AP-80
(64KX4 BIT D-RAM)
A0 ~ A7
I/O 1 ~ I/O 4
16 CAS
5 RAS
4 WE
1 OE
IC109 CF72306
(DATA SLICER)
19 SYNC
17 WIND
15 OSC OUT
13 TDATA
12 TCLK
C SIG 3
T SIG 1
S SIG 2
X102
13.875MHz
IC301 SAA4700
(VPS DATA DECODER)
8 SCL IN
9 S DATA
DATA 1
SYNC 2
IC106
LVA523S
BLANKING PULSE
H
N.C
TR208
EF
TR1
EF
WP2
VPST IN 4
VPST OUT 2
TO DECODER(2) PCB P2
C159, L154
HPF
IC108 MC1377P
(COLOUR TV RGB TO PAL ENCODER)
LATCHING RAMP GEN
COLOR DIFFERENCE AND LUMINANCE MATRIX
OUTPUT AMP/CLAMP
LPF
DUAL COMP
R-Y
B-Y
B-Y CLAMP
R-Y CLAMP
BURST PULSE DRIVE
PAL/NTSC CONTROL
VOLTAGE CONT 90°
PAL SWITCH 0/180°
OSC/BUFFER
REG
TR204
EF
TR203
AMP
BPF
C151, L151, 152
LPF
TR151~153
6dB AMP & BUFFER
AFC H SYNC
IC107 AN3171K
(CARRIER AND ID PULSE GENERATOR)
PAL F-F
INPUT BUFFER
COLOR KILLER DET
APC DET
TINT CONT
ACC DET
COLOR CONTRAST
BAND PASS AMP
BURST GATE PULSE
LINE IDENT
PAL/NTSC CW SW
PAL CW SW
÷2 90°SHIFT
OSC
(R-Y) DEMOD
(B-Y) DEMOD
SYNC SEP
OUTPUT BIAS ADJ
ID PULS BUFFER
PAL/NTSC MODE SW
X103
8.867MHz
VIDEO IN H(ID) PULSE
TEXT H(ID) PULSE
TR202
INV
D201
CLAMP
TR201
EF
TR154
EF
TR155
3dB
fsc
PHASE CORRECT
CARRIER OUT (180°)
ID PULSE
VPST/PDC PCB

Y IN (TUNER) SIGNAL
Y VPT SIGNAL
CHROMA IN (TUNER) SIGNAL
CHROMA VPT SIGNAL

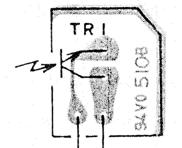
VS-G55EOG-V
VPST/PDC
BLOCK DIAGRAM
No. 7-7 V116412F
A2



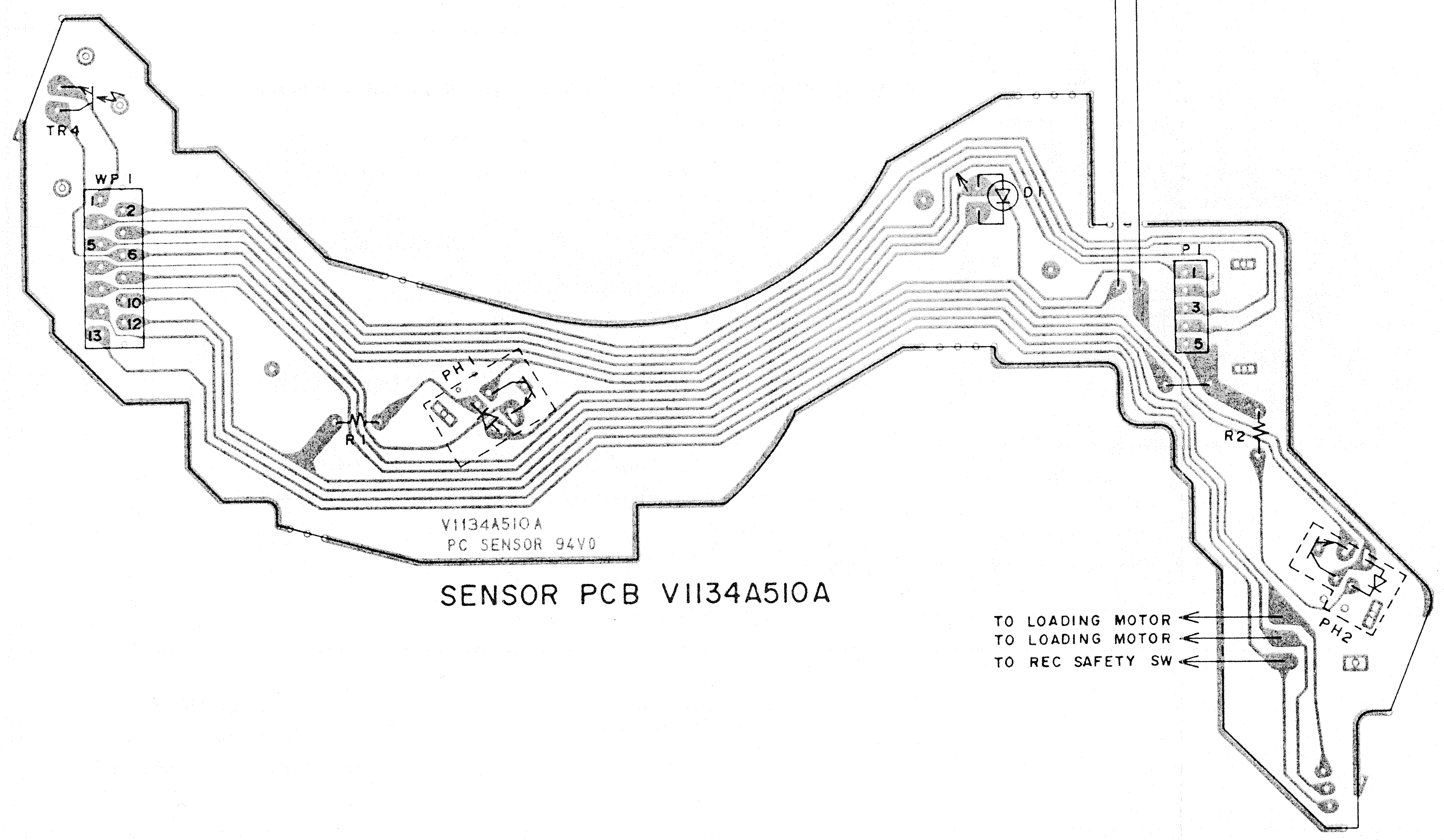
S-SWITCH PCB
V1154C5180


P1
1
3
6
AUDIO HEAD
S.ERASE HEAD
CTL HEAD

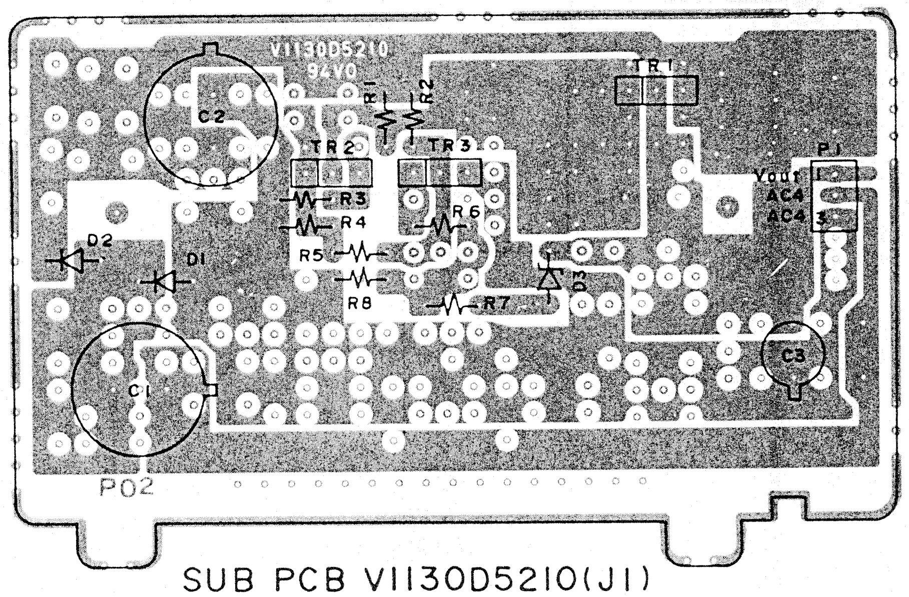
A / C HEAD PCB
V1102B5120(J1)


TR1
94V0 5108

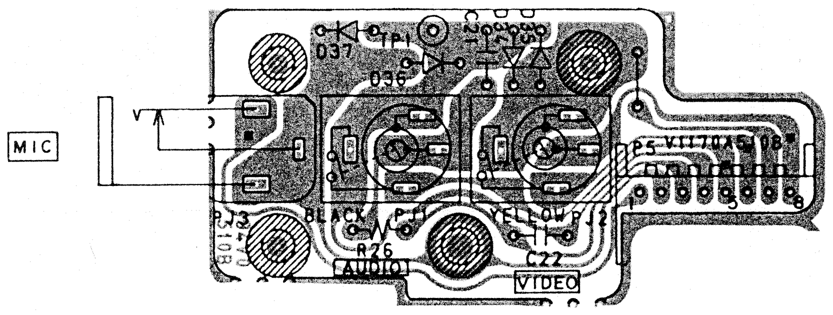
SENSOR(S) PCB
V1134A510B


TR4
WP1
1
2
5
6
10
12
13
R1
PH1
D1
P1
1
3
5
R2
PH2
V1134A510A
PC SENSOR 94V0
TO LOADING MOTOR
TO LOADING MOTOR
TO REC SAFETY SW

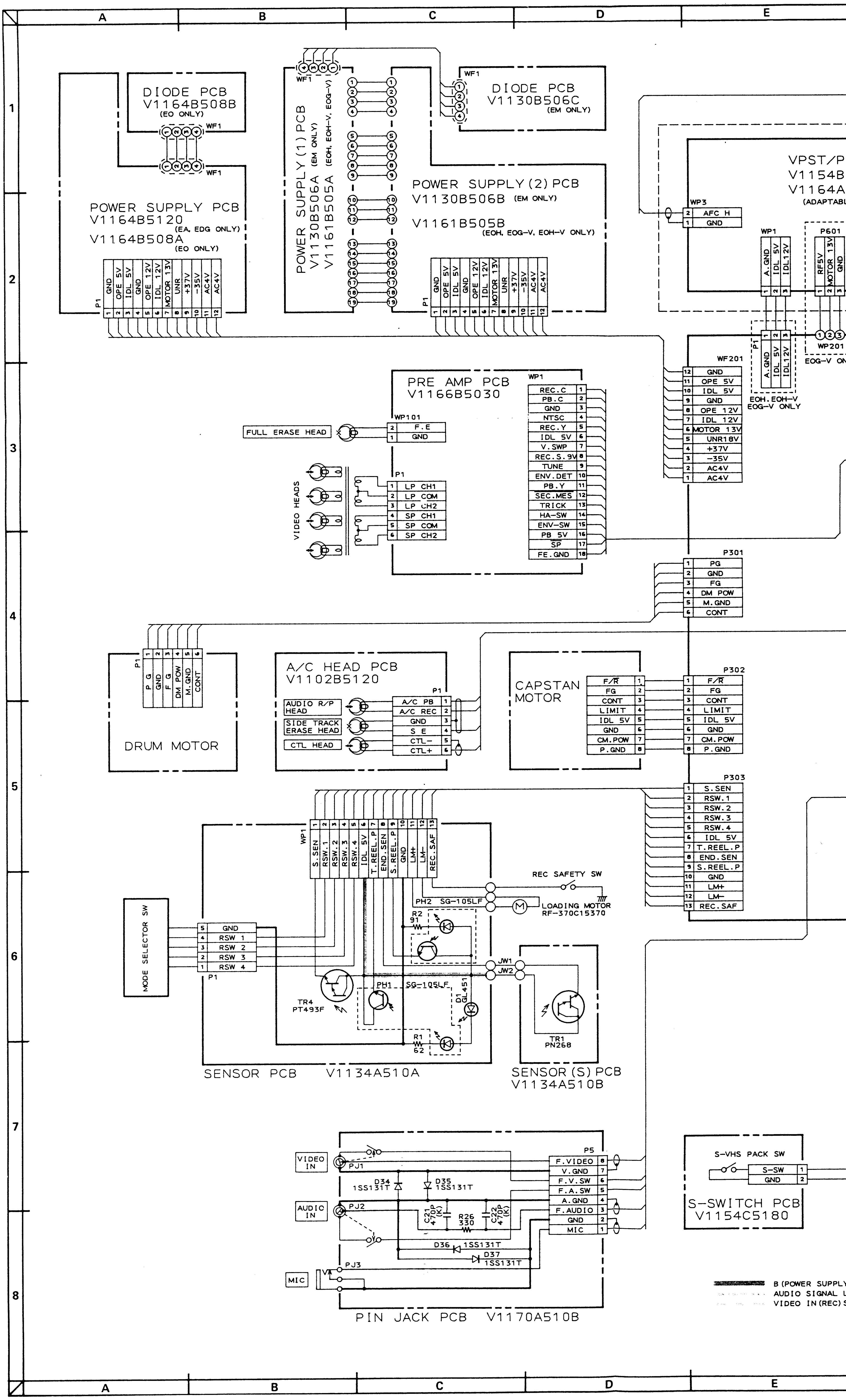
SENSOR PCB V1134A510A

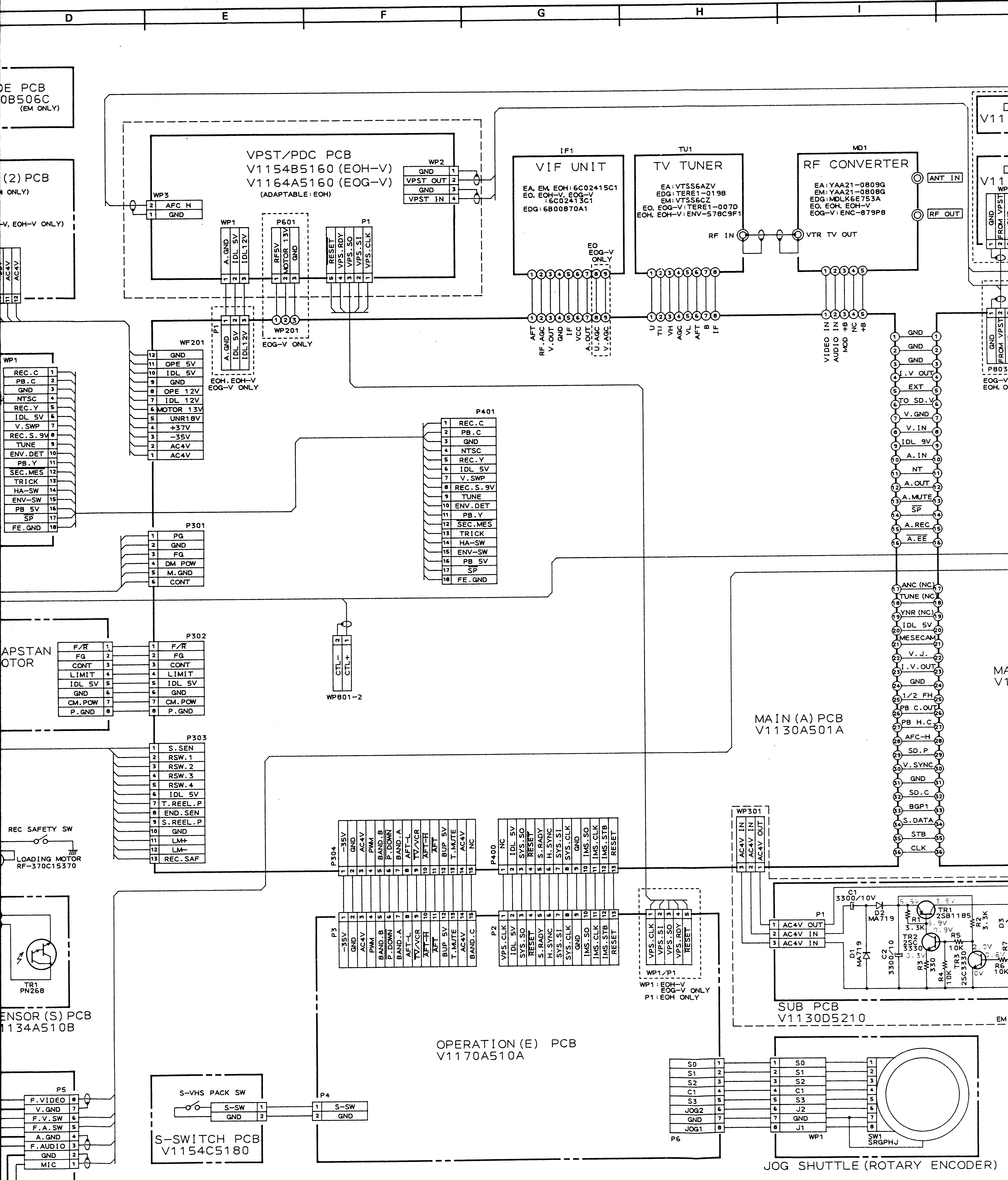

V1130D5210
94V0
C2
R1
R2
TR1
TR2
TR3
R3
R4
R5
R6
R7
R8
D1
D2
D3
P1
Vout
AC4
AC4
3
C1
C3
P02

SUB PCB V1130D5210(J1)
(EM ONLY)


MIC
D37
TP1
D36
P5
V1170A510B
BLACK
YELLOW
R26
C22
AUDIO
VIDEO
PJ3
PJ2

PIN JACK PCB V1170A510B


A
B
C
D
E
1
2
3
4
5
6
7
8
DIODE PCB
V1164B508B
(EO ONLY)
WF1
POWER SUPPLY PCB
V1164B5120
(EA, EDG ONLY)
V1164B508A
(EO ONLY)
P1
GND
OPE 5V
IDL 5V
GND
OPE 12V
IDL 12V
MOTOR 13V
UNR
+37V
−35V
AC4V
AC4V
POWER SUPPLY (1) PCB
V1130B506A (EM ONLY)
V1161B505A (EOH, EOH−V, EOG−V)
POWER SUPPLY (2) PCB
V1130B506B (EM ONLY)
V1161B505B
(EOH, EOG−V, EOH−V ONLY)
DIODE PCB
V1130B506C
(EM ONLY)
VPST/P
V1154B
V1164A
(ADAPTABL
WP3
AFC H
GND
WP1
A.GND
IDL 5V
IDL12V
P601
RF5V
MOTOR 13V
GND
WP201
EOG−V ON
EOH. EOH−V
EOG−V ONLY
WF201
GND
OPE 5V
IDL 5V
GND
OPE 12V
IDL 12V
MOTOR 13V
UNR18V
+37V
−35V
AC4V
AC4V
PRE AMP PCB
V1166B5030
WP101
FULL ERASE HEAD
F.E
GND
VIDEO HEADS
LP CH1
LP COM
LP CH2
SP CH1
SP COM
SP CH2
WP1
REC.C
PB.C
GND
NTSC
REC.Y
IDL 5V
V.SWP
REC.S.9V
TUNE
ENV.DET
PB.Y
SEC.MES
TRICK
HA−SW
ENV−SW
PB 5V
SP
FE.GND
P301
PG
GND
FG
DM POW
M.GND
CONT
DRUM MOTOR
P G
GND
F G
DM POW
M.GND
CONT
A/C HEAD PCB
V1102B5120
AUDIO R/P HEAD
SIDE TRACK ERASE HEAD
CTL HEAD
A/C PB
A/C REC
GND
S E
CTL−
CTL+
CAPSTAN MOTOR
F/R̄
FG
CONT
LIMIT
IDL 5V
GND
CM.POW
P.GND
P302
P303
S.SEN
RSW.1
RSW.2
RSW.3
RSW.4
IDL 5V
T.REEL.P
END.SEN
S.REEL.P
GND
LM+
LM−
REC.SAF
REC SAFETY SW
PH2 SG−105LF
LOADING MOTOR
RF−370C15370
R2
91
MODE SELECTOR SW
GND
RSW 1
RSW 2
RSW 3
RSW 4
TR4
PT493F
PH1 SG−105LF
D1
GL451
R1
62
JW1
JW2
TR1
PN268
SENSOR PCB V1134A510A
SENSOR (S) PCB
V1134A510B
VIDEO IN
PJ1
D34
1SS131T
D35
1SS131T
AUDIO IN
PJ2
C21
470P
(K)
R26
330
C22
470P
(K)
D36
1SS131T
D37
1SS131T
MIC
PJ3
P5
F.VIDEO
V.GND
F.V.SW
F.A.SW
A.GND
F.AUDIO
GND
MIC
PIN JACK PCB V1170A510B
S−VHS PACK SW
S−SW
GND
S−SWITCH PCB
V1154C5180
B (POWER SUPPLY
AUDIO SIGNAL L
VIDEO IN (REC) S

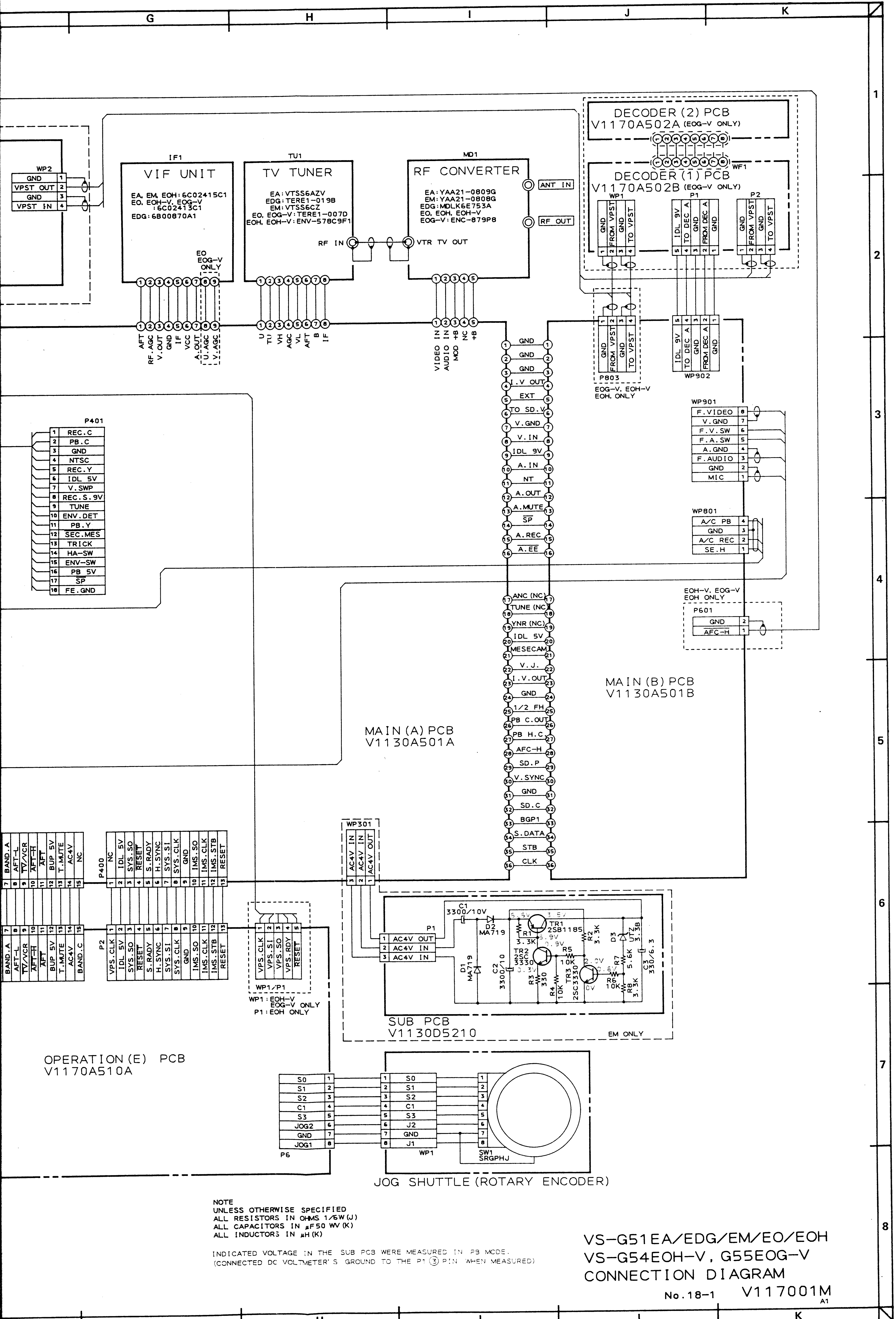

D
E
F
G
H
I
DE PCB
0B506C
(EM ONLY)
(2) PCB
M ONLY)
-V, EOH-V ONLY)
AC4V
AC4V
VPST/PDC PCB
V1154B5160 (EOH-V)
V1164A5160 (EOG-V)
(ADAPTABLE:EOH)
WP3
AFC H
GND
WP2
GND
VPST OUT
GND
VPST IN
WP1
A.GND
IDL 5V
IDL12V
P601
RF5V
MOTOR 13V
GND
P1
RESET
VPS.RDY
VPS.SO
VPS.SI
VPS.CLK
WP201
EOG-V ONLY
EOH.EOH-V
EOG-V ONLY
IF1
VIF UNIT
EA, EM, EOH:6C02415C1
EO, EOH-V, EOG-V
:6C02413C1
EDG:6B00870A1
EO
EOG-V
ONLY
AFT
RF.AGC
V.OUT
GND
IF
VCC
A.OUT
U.AGC
V.AGC
TU1
TV TUNER
EA:VTSS6AZV
EDG:TERE1-019B
EM:VTSS6CZ
EO, EOG-V:TERE1-007D
EOH, EOH-V:ENV-578C9F1
RF IN
U
TU
VH
AGC
VL
AFT
B
IF
MD1
RF CONVERTER
EA:YAA21-0809G
EM:YAA21-0808G
EDG:MDLK6E753A
EO, EOH, EOH-V
EOG-V:ENC-879P8
ANT IN
RF OUT
VTR TV OUT
VIDEO IN
AUDIO IN
MOD +B
NC
+B
V11
WP
GND
FROM VPST
P803
EOG-V
EOH, O
WF201
GND
OPE 5V
IDL 5V
GND
OPE 12V
IDL 12V
MOTOR 13V
UNR18V
+37V
-35V
AC4V
AC4V
WP1
REC.C
PB.C
GND
NTSC
REC.Y
IDL 5V
V.SWP
REC.S.9V
TUNE
ENV.DET
PB.Y
SEC.MES
TRICK
HA-SW
ENV-SW
PB 5V
SP
FE.GND
P401
REC.C
PB.C
GND
NTSC
REC.Y
IDL 5V
V.SWP
REC.S.9V
TUNE
ENV.DET
PB.Y
SEC.MES
TRICK
HA-SW
ENV-SW
PB 5V
SP
FE.GND
P301
PG
GND
FG
DM POW
M.GND
CONT
CTL-
CTL+
WP801-2
APSTAN
OTOR
F/R
FG
CONT
LIMIT
IDL 5V
GND
CM.POW
P.GND
P302
F/R
FG
CONT
LIMIT
IDL 5V
GND
CM.POW
P.GND
P303
S.SEN
RSW.1
RSW.2
RSW.3
RSW.4
IDL 5V
T.REEL.P
END.SEN
S.REEL.P
GND
LM+
LM-
REC.SAF
REC SAFETY SW
LOADING MOTOR
RF-370C15370
TR1
PN268
ENSOR (S) PCB
1134A510B
P304
-35V
GND
AC4V
PWM
BAND.B
P.DOWN
BAND.A
AFT-L
TV/VCR
AFT-H
AFT
BUP 5V
T.MUTE
AC4V
NC
P400
NC
IDL 5V
SYS.SO
RESET
S.RADY
H.SYNC
SYS.SI
SYS.CLK
GND
IMS.SO
IMS.CLK
IMS.STB
RESET
P3
-35V
GND
AC4V
PWM
BAND.B
P.DOWN
BAND.A
AFT-L
TV/VCR
AFT-H
AFT
BUP 5V
T.MUTE
AC4V
BAND.C
P2
VPS.CLK
IDL 5V
SYS.SO
RESET
S.RADY
H.SYNC
SYS.SI
SYS.CLK
GND
IMS.SO
IMS.CLK
IMS.STB
RESET
VPS.CLK
VPS.SI
VPS.SO
VPS.RDY
RESET
WP1/P1
WP1:EOH-V
EOG-V ONLY
P1:EOH ONLY
WP301
AC4V IN
AC4V IN
AC4V OUT
GND
GND
GND
I.V OUT
EXT
TO SD.V
V.GND
V.IN
IDL 9V
A.IN
NT
A.OUT
A.MUTE
SP
A.REC
A.EE
ANC (NC)
TUNE (NC)
YNR (NC)
IDL 5V
MESECAM
V.J.
I.V.OUT
GND
1/2 FH
PB C.OUT
PB H.C
AFC-H
SD.P
V.SYNC
GND
SD.C
BGP1
S.DATA
STB
CLK
MAIN (A) PCB
V1130A501A
MA
V1
P1
AC4V OUT
AC4V IN
AC4V IN
C1
3300/10V
D2
MA719
TR1
2SB1185
R1
3.3K
R2
3.3K
TR2
2SC
3330
R5
10K
D1
MA719
C2
3300/10
R3
330
R4
10K
TR3
2SC3330
R6
10K
R7
D3
6.5V
3.5V
3.9V
0.9V
0.3V
2.0V
0.6V
0V
SUB PCB
V1130D5210
EM
OPERATION (E) PCB
V1170A510A
P5
F.VIDEO
V.GND
F.V.SW
F.A.SW
A.GND
F.AUDIO
GND
MIC
S-VHS PACK SW
S-SW
GND
S-SWITCH PCB
V1154C5180
P4
S-SW
GND
S0
S1
S2
C1
S3
JOG2
GND
JOG1
P6
S0
S1
S2
C1
S3
J2
GND
J1
WP1
SW1
SRGPHJ
JOG SHUTTLE (ROTARY ENCODER)
0A510B

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF50 WV (K)
ALL INDUCTORS IN μH (K)

INDICATED VOLTAGE IN THE SUB PCB WERE MEASURED IN PB MODE.
(CONNECTED DC VOLTMETER'S GROUND TO THE P1 ③ PIN WHEN MEASURED)

▬	B (POWER SUPPLY) LINE
┄	AUDIO SIGNAL LINE
┄	VIDEO IN (REC) SIGNAL LINE

VS-
VS-
CON

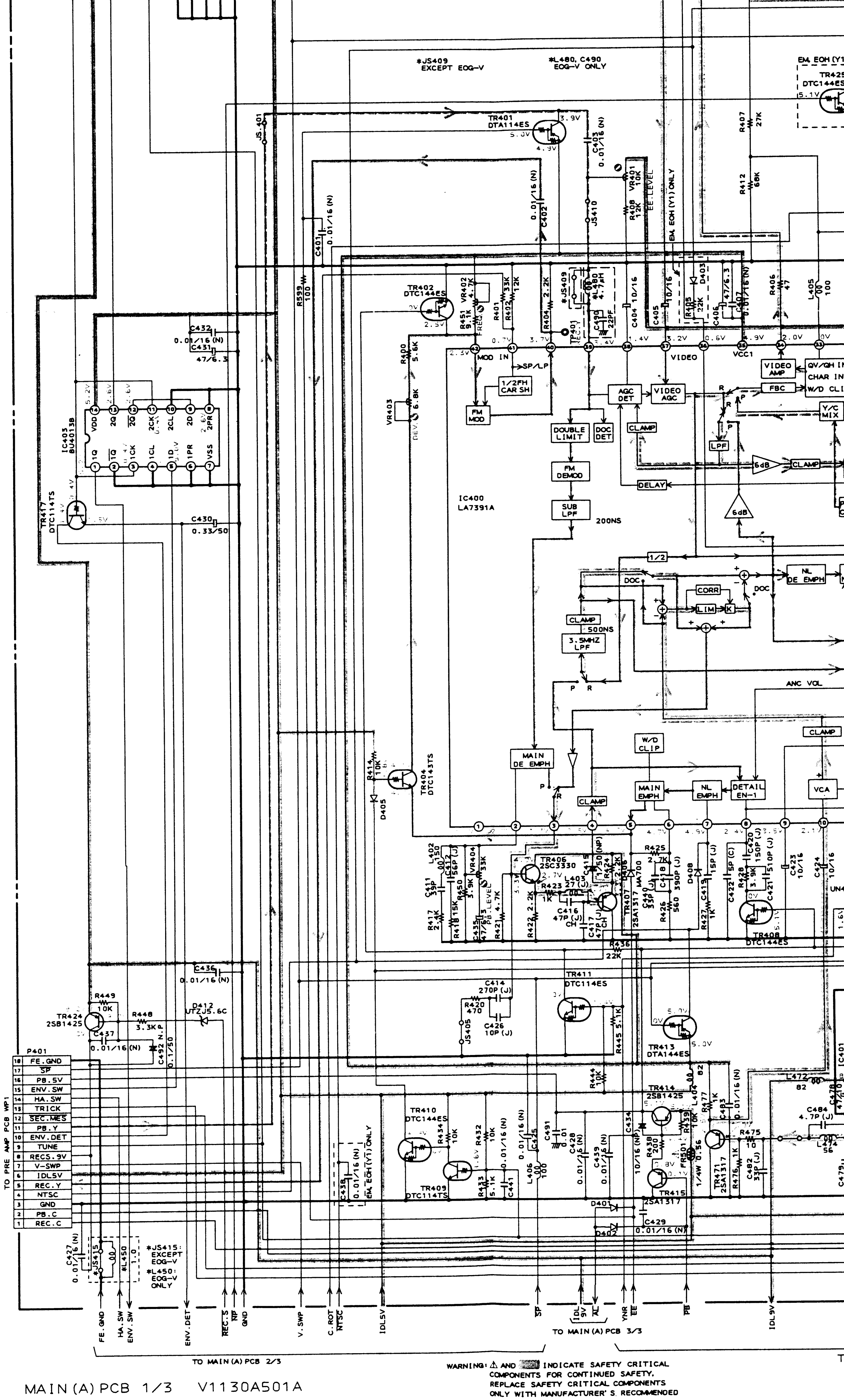

G
H
I
J
K
1
2
3
4
5
6
7
8
WP2
GND
VPST OUT
GND
VPST IN
IF1
VIF UNIT
EA, EM, EOH: 6C02415C1
EO, EOH-V, EOG-V : 6C02413C1
EDG: 6B00870A1
EO
EOG-V
ONLY
TU1
TV TUNER
EA: VTSS6AZV
EDG: TERE1-019B
EM: VTSS6CZ
EO, EOG-V: TERE1-007D
EOH, EOH-V: ENV-578C9F1
MD1
RF CONVERTER
EA: YAA21-0809G
EM: YAA21-0808G
EDG: MDLK6E753A
EO, EOH, EOH-V
EOG-V: ENC-879P8
ANT IN
RF OUT
RF IN
VTR TV OUT
AFT
RF.AGC
V.OUT
GND
IF
VCC
A.OUT
U.AGC
V.AGC
U
TI
VH
AGC
VL
AFT
B
IF
VIDEO IN
AUDIO IN
MOD +B
NC
+B
DECODER (2) PCB
V1170A502A (EOG-V ONLY)
DECODER (1) PCB
V1170A502B (EOG-V ONLY)
WF1
WP1
P1
P2
GND
FROM VPST
GND
TO VPST
IDL 9V
TO DEC A
GND
FROM DEC A
GND
P803
EOG-V, EOH-V
EOH, ONLY
WP902
WP901
F.VIDEO
V.GND
F.V.SW
F.A.SW
A.GND
F.AUDIO
GND
MIC
WP801
A/C PB
GND
A/C REC
SE.H
EOH-V, EOG-V
EOH ONLY
P601
GND
AFC-H
GND
GND
GND
I.V OUT
EXT
TO SD.V
V.GND
V.IN
IDL 9V
A.IN
NT
A.OUT
A.MUTE
SP
A.REC
A.EE
ANC (NC)
TUNE (NC)
YNR (NC)
IDL 5V
MESECAM
V.J.
I.V.OUT
GND
1/2 FH
PB C.OUT
PB H.C
AFC-H
SD.P
V.SYNC
GND
SD.C
BGP1
S.DATA
STB
CLK
P401
REC.C
PB.C
GND
NTSC
REC.Y
IDL 5V
V.SWP
REC.S.9V
TUNE
ENV.DET
PB.Y
SEC.MES
TRICK
HA-SW
ENV-SW
PB 5V
SP
FE.GND
MAIN (B) PCB
V1130A501B
MAIN (A) PCB
V1130A501A
BAND.A
AFT-L
TV/VCR
AFT-H
AFT
BUP 5V
T.MUTE
AC4V
NC
BAND.C
P400
P2
NC
IDL 5V
SYS.SO
RESET
S.RADY
H.SYNC
SYS.SI
SYS.CLK
GND
IMS.SO
IMS.CLK
IMS.STB
RESET
VPS.CLK
VPS.SI
VPS.SO
VPS.RDY
WP1/P1
WP1: EOH-V
EOG-V ONLY
P1: EOH ONLY
WP301
AC4V IN
AC4V IN
AC4V OUT
P1
AC4V OUT
AC4V IN
AC4V IN
C1
3300/10V
D2
MA719
TR1
2SB1185
R1
3.3K
TR2
2SC3330
R5
10K
R2
3.3K
D3
UTZ 3.3B
C2
3300/10
D1
MA719
R3
330
R4
10K
TR3
2SC3330
R7
5.6K
R6
10K
R8
3.3K
C3
330/6.3
5.6V
3.5V
3.9V
3.3V
2.0V
2.6V
0V
SUB PCB
V1130D5210
EM ONLY
OPERATION (E) PCB
V1170A510A
P6
S0
S1
S2
C1
S3
JOG2
GND
JOG1
WP1
J2
J1
SW1
SRGPHJ
JOG SHUTTLE (ROTARY ENCODER)

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF50 WV (K)
ALL INDUCTORS IN μH (K)

INDICATED VOLTAGE IN THE SUB PCB WERE MEASURED IN PB MODE.
(CONNECTED DC VOLTMETER'S GROUND TO THE P1 ③ PIN WHEN MEASURED)

VS-G51EA/EDG/EM/EO/EOH
VS-G54EOH-V, G55EOG-V
CONNECTION DIAGRAM

No.18-1 V117001M A1

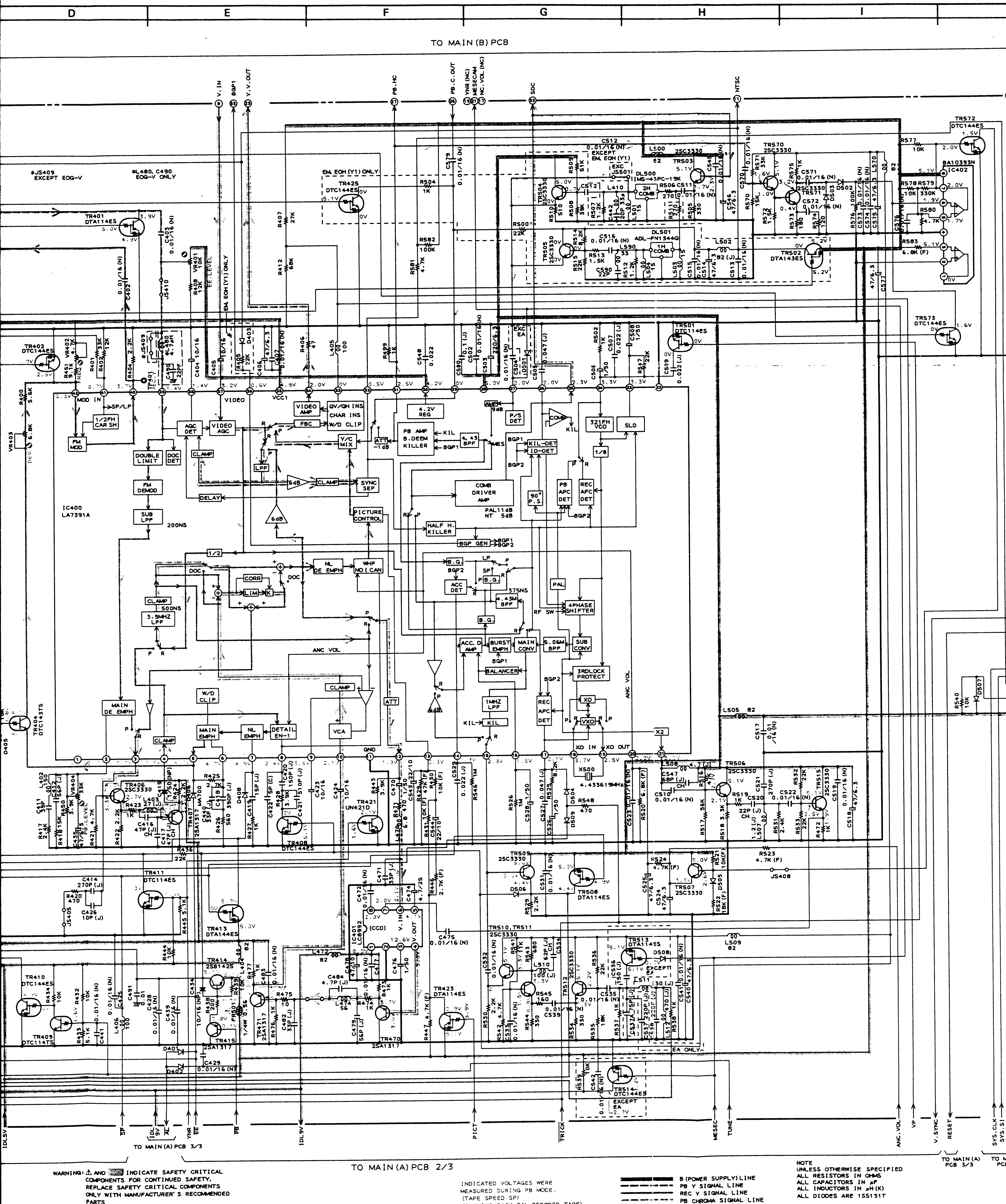

A
B
C
D
E
1
2
3
4
5
6
7
8
AFC-H
IDL.9V
1/2fh
TUNE
GND
IDL5V
SP
V.IN
BGP1
Y.V.OUT
*JS409 EXCEPT EOG-V
*L480, C490 EOG-V ONLY
TR401 DTA114ES
TR402 DTC144ES
TR403 DTC144ES
VR401 EE LEVEL
IC405 BU4013B
TR417 DTC114TS
IC400 LA7391A
MOD IN
SP/LP
1/2FH CAR SH
FM MOD
DOUBLE LIMIT
DOC DET
FM DEMOD
SUB LPF
200NS
AGC DET
VIDEO AGC
VIDEO
VCC1
VIDEO AMP
CLAMP
DELAY
6dB
LPF
Y/C MIX
FBC
QV/QH IN
CHAR IN
W/D CLIP
EM, EOH (Y1)
TR425 DTC144ES
1/2
DOC
CORR
LIM
NL DE EMPH
3.5MHZ LPF
500NS
ANC VOL
MAIN DE EMPH
W/D CLIP
MAIN EMPH
NL EMPH
DETAIL EN-1
VCA
TR404 DTC143TS
D405
TR406 2SC3330
TR407 2SA1317
TR408 DTC144ES
PB.LEVEL
TR411 DTC114ES
TR413 DTA144ES
TR424 2SB1425
D412 UTZJ5.6C
TR410 DTC144ES
TR409 DTC114TS
TR414 2SB1425
TR415 2SA1317
TR471 2SA1317
D401
D402
P401
18 FE.GND
17 SP
16 PB.5V
15 ENV.SW
14 HA.SW
13 TRICK
12 SEC.MES
11 PB.Y
10 ENV.DET
9 TUNE
8 RECS.9V
7 V-SWP
6 IDL5V
5 REC.Y
4 NTSC
3 GND
2 PB.C
1 REC.C
TO PRE AMP PCB WP1
*JS415: EXCEPT EOG-V
*L450: EOG-V ONLY
FE.GND
HA.SW
ENV.SW
ENV.DET
REC.S
RP
GND
V.SWP
C.ROT
NTSC
IDL5V
SP
IDL 9V
AL
YNR
EE
PB
IDL9V
TO MAIN (A) PCB 3/3
TO MAIN (A) PCB 2/3

MAIN (A) PCB 1/3 V1130A501A

WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL
COMPONENTS FOR CONTINUED SAFETY.
REPLACE SAFETY CRITICAL COMPONENTS
ONLY WITH MANUFACTURER'S RECOMMENDED
PARTS

AVERTISSMENT: ⚠ ET ▨, ILS INDIQUENT LES
COMPOSTANTS CRITIQUES DE SÉCURITÉ,
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ
DE L'APPAREIL, NE REMPLACER QUE DES
PIÈCES RECOMMANDEES PAR LE FABRICANT

]


D
E
F
G
H
I
TO MAIN (B) PCB
V.IN
BGP1
Y.V.OUT
PB.HC
PB.C.OUT
YNR (NC)
MESECAM
NC.VOL (NC)
SDC
NTSC
*JS409 EXCEPT EOG-V
*L480, C490 EOG-V ONLY
EM, EOH (Y1) ONLY
TR425 DTC144ES
TR401 DTA114ES
TR402 DTC144ES
TR404 DTC143TS
TR406 2SC3330
TR407 2SA1317
TR408 DTC144ES
TR409 DTC114TS
TR410 DTC144ES
TR411 DTC114ES
TR413 DTA114ES
TR414 2SB1425
TR415 2SA1317
TR421 UN421D
TR423 DTA114ES
TR470 2SA1317
TR471 2SA1317
TR501 DTC114ES
TR502 DTA143ES
TR503 2SC3330
TR504 2SC3330
TR505 2SC3330
TR506 2SC3330
TR507 2SC3330
TR508 DTA114ES
TR509 2SC3330
TR510, TR511 2SC3330
TR512 2SC3330
TR513 DTA114ES
TR514 DTC144ES
TR515 2SC3330
TR570 2SC3330
TR571 2SC3330
TR572 DTC144ES
TR573 DTC144ES
BA10393N IC402
DL500 IMS-43PC-19K
DL501 ADL-FN1344Q
IC400 LA7391A
IC401 LC8992 (CCD)
X500 4.433619MHz
EE.LEVEL
MOD IN
SP/LP
1/2FH CAR SH
FM MOD
AGC DET
VIDEO AGC
VIDEO
VCC1
VIDEO AMP
QV/QH INS CHAR INS W/D CLIP
FBC
Y/C MIX
4.2V REG
PB AMP B.DEEM KILLER
ATT -1dB
4.43 BPF
AMP 9dB
P/S DET
COMP
KIL-DET ID-DET
321FH VCO
SLD
1/8
DOUBLE LIMIT
DOC DET
CLAMP
LPF
6dB
SYNC SEP
DELAY
FM DEMOD
SUB LPF
200NS
COMB DRIVER AMP
PAL11dB NT 5dB
90° P.S.
PB APC DET
REC AFC DET
PICTURE CONTROL
HALF H. KILLER
BGP GEN
1/2
NL DE EMPH
WHP NOI CAN
CORR
LIM
DOC
B.G.
ACC DET
4.43M BPF
375NS
PAL
4PHASE SHIFTER
RF SW
500NS
3.5MHZ LPF
ANC VOL
ACC. D AMP
BURST EMPH
MAIN CONV
5.06M BPF
SUB CONV
BALANCER
3RDLOCK PROTECT
W/D CLIP
MAIN DE EMPH
MAIN EMPH
NL EMPH
DETAIL EN-1
VCA
ATT
1MHZ LPF
KIL
REC APC DET
XO
VXO
XO IN
XO OUT
X2
GND
EA ONLY
EXCEPT EA
IDL5V
SP
IDL 9V
AL
YNR
EE
PB
IDL9V
PICT
TRICK
MESEC
TUNE
ANC.VOL
VP
V.SYNC
RESET
SYS.CLK
SYS.SI
TO MAIN (A) PCB 3/3
TO MAIN (A) PCB 3/3
TO MAIN (A) PCB 2/3

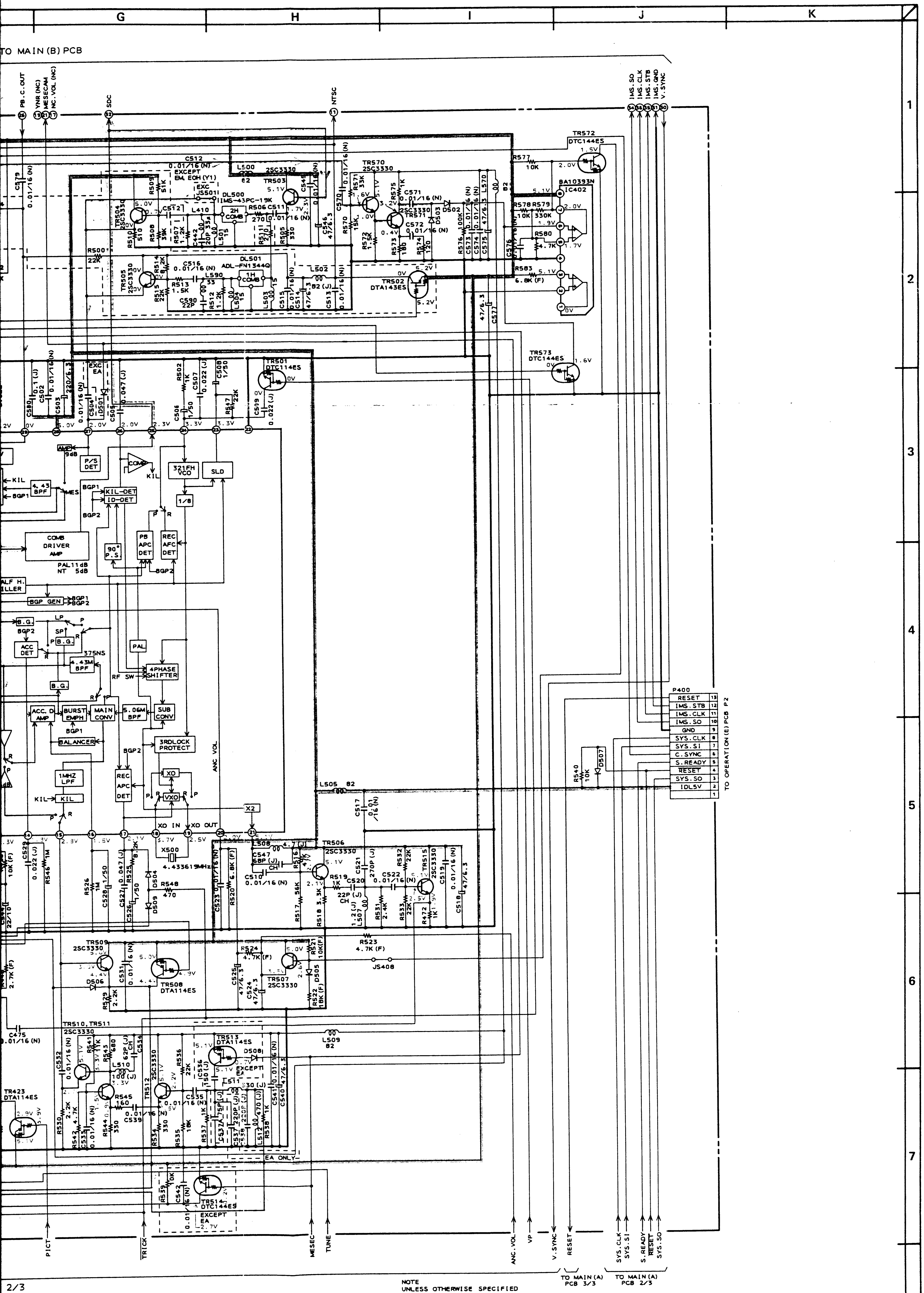
WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ▨, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

INDICATED VOLTAGES WERE
MEASURED DURING PB MODE.
(TAPE SPEED: SP)
(PLAYING BACK PAL RECODED TAPE)

B (POWER SUPPLY) LINE
PB Y SIGNAL LINE
REC Y SIGNAL LINE
PB CHROMA SIGNAL LINE
REC CHROMA SIGNAL LINE

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN µF
ALL INDUCTORS IN µH (K)
ALL DIODES ARE 1SS131T


TO MAIN (B) PCB
PB.C.OUT
YNR (NC)
MESECAM
NC.VOL (NC)
SDC
NTSC
IMS.SO
IMS.CLK
IMS.STB
IMS.GND
V.SYNC
TR572 DTC144ES
BA10393N IC402
TR570 2SC3330
TR503 2SC3330
DL500 IMS-43PC-19K
DL501 ADL-FN1344Q
TR502 DTA143ES
TR505 2SC3330
TR504 2SC3330
TR573 DTC144ES
TR501 DTC144ES
COMB DRIVER AMP
321FH VCO
SLD
KIL-DET
ID-DET
PB APC DET
REC AFC DET
90° P.S.
BGP GEN
ACC DET
4.43M BPF
4PHASE SHIFTER
ACC. D AMP
BURST EMPH
MAIN CONV
5.06M BPF
SUB CONV
BALANCER
3RDLOCK PROTECT
1MHZ LPF
KIL
REC APC DET
XO
VXO
X500 4.433619MHz
XO IN
XO OUT
ANC VOL
P400
RESET
IMS.STB
IMS.CLK
IMS.SO
GND
SYS.CLK
SYS.SI
C.SYNC
S.READY
RESET
SYS.SO
IDL5V
TO OPERATION (E) PCB P2
TR506 2SC3330
TR515 2SC3330
TR509 2SC3330
TR508 DTA114ES
TR507 2SC3330
TR510, TR511 2SC3330
TR513 DTA114ES
TR512 2SC3330
TR514 DTC144ES
TR423 DTA114ES
EXCEPT EA
EA ONLY
PICT
TRICK
MESEC
TUNE
ANC.VOL
VP
V.SYNC
RESET
SYS.CLK
SYS.SI
S.READY
RESET
SYS.SO
TO MAIN (A) PCB 3/3
TO MAIN (A) PCB 2/3

2/3

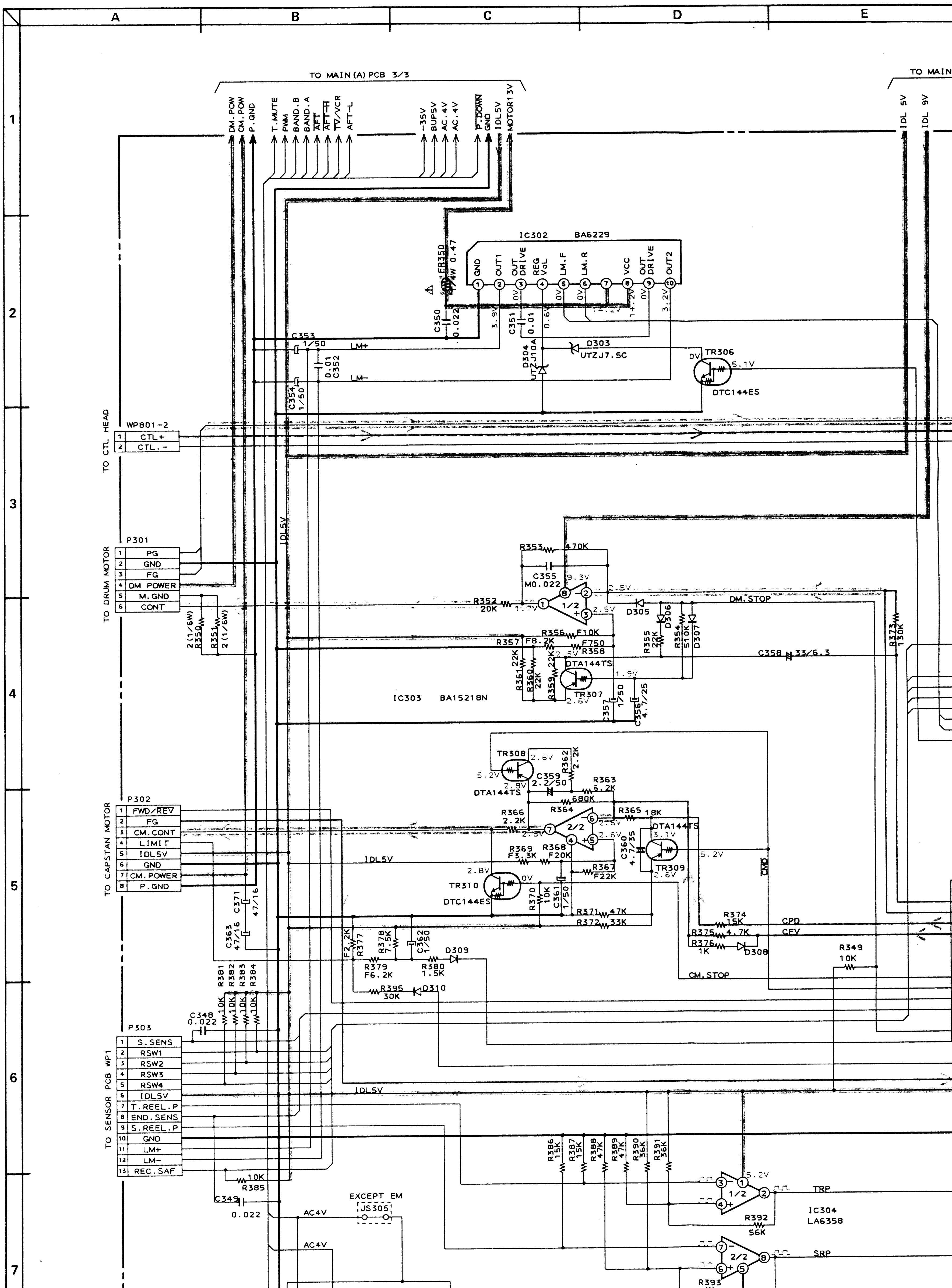
INDICATED VOLTAGES WERE
MEASURED DURING PB MODE.
(TAPE SPEED:SP)
(PLAYING BACK PAL RECODED TAPE)

━━━━ B (POWER SUPPLY) LINE
— — — PB Y SIGNAL LINE
──── REC Y SIGNAL LINE
-·-·- PB CHROMA SIGNAL LINE
----- REC CHROMA SIGNAL LINE

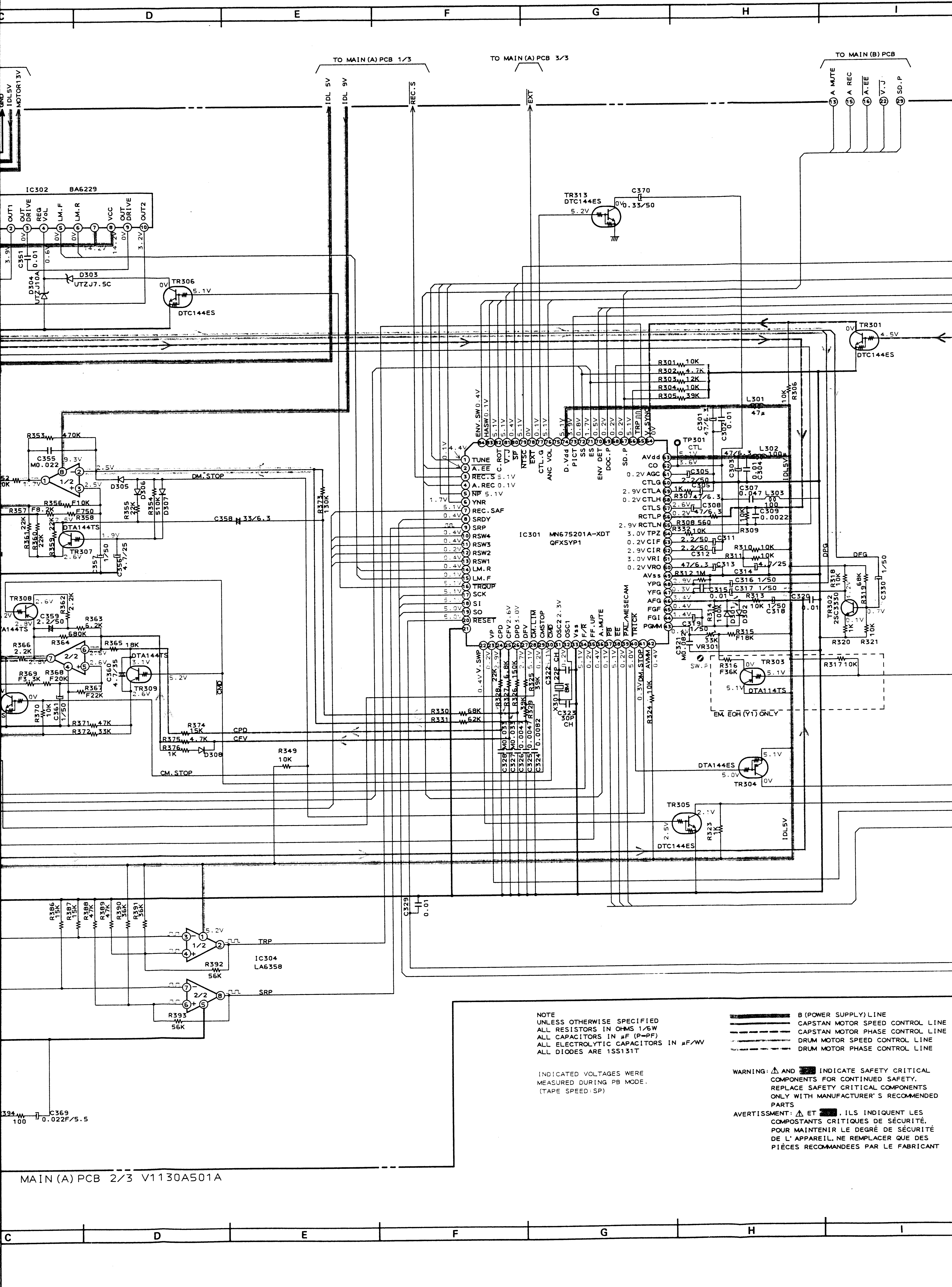
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN μF
ALL INDUCTORS IN μH (K)
ALL DIODES ARE 1SS131T

VS-G51EA/EDG/EM/EO/EOH
VS-G54EOH-V, G55EOG-V
MAIN (A) 1/3
(VIDEO BLK)
SCHEMATIC DIAGRAM

No.18-2 V117005M
A0


A
B
C
D
E
1
2
3
4
5
6
7
8
TO MAIN (A) PCB 3/3
DM.POW
CM.POW
P.GND
T.MUTE
PWM
BAND.B
BAND.A
AFT
AFT-H
TV/VCR
AFT-L
-35V
BUP5V
AC.4V
AC.4V
P.DOWN
GND
IDL5V
MOTOR13V
TO MAIN
IDL 5V
IDL 9V
IC302 BA6229
GND
OUT1
OUT DRIVE
REG VoL
LM.F
LM.R
VCC
OUT DRIVE
OUT2
FR350 1/4W 0.47
C350 0.022
3.9V
C351 0.01
0V
0.6V
0V
0V
14.2V
0V
3.2V
C353 1/50
LM+
C352 0.01
C354 1/50
LM-
D304 UTZJ10A
D303 UTZJ7.5C
TR306
0V
5.1V
DTC144ES
TO CTL HEAD
WP801-2
CTL+
CTL.-
IDL5V
TO DRUM MOTOR
P301
PG
GND
FG
DM POWER
M.GND
CONT
R350 2(1/6W)
R351 2(1/6W)
R353 470K
C355 M0.022
9.3V
2.5V
R352 20K
1.7V
1/2
2.5V
D305
D306
D307
DM.STOP
R355 22K
R354 510K
R356 F10K
R357 F8.2K
F750 R358
R361 22K
R360 22K
R359 22K
2.5V
DTA144TS
1.9V
TR307
2.6V
C357 1/50
C356 4.7/25
C358 33/6.3
R373 130K
IC303 BA15218N
TR308
2.6V
R362 2.2K
5.2V
C359 2.2/50
2.8V
DTA144TS
R363 6.2K
680K
R364
R365 18K
R366 2.2K
2/2
2.5V
2.6V
DTA144TS
3.1V
C360 4.7/35
R369 F3.3K
R368 F20K
5.2V
R367 F22K
TR309
2.6V
2.8V
TR310
0V
DTC144ES
R370 10K
C361 1/50
R371 47K
R372 33K
R374 15K
R375 4.7K
R376 1K
D308
CPD
CFV
CM.STOP
R349 10K
CMD
TO CAPSTAN MOTOR
P302
FWD/REV
FG
CM.CONT
LIMIT
IDL5V
GND
CM.POWER
P.GND
C371 47/16
C363 47/16
R377 F2.2K
R378 7.5K
C362 1/50
D309
R379 F6.2K
R380 1.5K
R395 30K
D310
TO SENSOR PCB WP1
P303
C348 0.022
R381 10K
R382 10K
R383 10K
R384 10K
S.SENS
RSW1
RSW2
RSW3
RSW4
IDL5V
T.REEL.P
END.SENS
S.REEL.P
GND
LM+
LM-
REC.SAF
IDL5V
R386 15K
R387 15K
R388 47K
R389 47K
R390 36K
R391 36K
5.2V
1/2
TRP
IC304 LA6358
R392 56K
2/2
SRP
R393 56K
R385 10K
C349 0.022
EXCEPT EM
JS305
AC4V
AC4V
C364 0.01
C365 0.01
C366 0.01
C367 0.01
C368 0.01
R394 100
C369 0.022F/5.5
EM ONLY
TO SUB PCB P1
WP301
AC 4V IN
AC 4V IN
AC 4V OUT
P304
-35V
GND
AC4V
PWM
BAND.B
P.DOWN
BAND.A
AFT-L
TV/VCR
AFT-H
AFT
BUP5V
T.MUTE
AC4V
BAND.C
TO OPERATION (E) PCB P3

MAIN (A) PCB 2/3 V1130A501A


C
D
E
F
G
H
I
TO MAIN (A) PCB 1/3
TO MAIN (A) PCB 3/3
TO MAIN (B) PCB
GND
IDL5V
MOTOR13V
IDL 5V
IDL 9V
REC.S
EXT
A MUTE
A REC
A.EE
V.J
SD.P
IC302 BA6229
OUT1
OUT DRIVE
REG VOL
LM.F
LM.R
VCC
OUT DRIVE
OUT2
C351 0.01
D303 UTZJ7.5C
D304 UTZJ10A
TR306 DTC144ES
TR313 DTC144ES
C370 0.33/50
TR301 DTC144ES
R301 10K
R302 4.7K
R303 12K
R304 10K
R305 39K
L301 47µ
C301 47/6.3
C302 0.01
TP301 CTL
L302 100µ
IC301 MN675201A-XDT QFXSYP1
TUNE
A.EE
REC.S
A.REC
NP
YNR
REC.SAF
SRDY
SRP
RSW4
RSW3
RSW2
RSW1
LM.R
LM.F
TRQUP
SCK
SI
SO
RESET
ENV.SW
HASW
C.ROT
V.J
SP
NTSC
EXT
CTL.G
ANC VOL
D.Vdd
PICT
SS
ES
ENV DET
DOC.P
SD.P
TRP
V.SYNC
AVdd
CO
AGC
CTLG
CTLH
CTLS
RCTLP
RCTLN
TPZ
CIF
CIR
VRI
VRO
AVss
YPG
YFG
AFG
FGF
FGI
PGMM
VP
CPD
CFV
DPD
DFV
CM.LIM
CMSTOP
CMD
OSC2
OSC1
Vss
F/R
FF.UP
A.MUTE
PB
EE
PAL/MESECAM
TRICK
DM.STOP
AVMM
R353 470K
C355 M0.022
R356 F10K
R357 F8.2K
F750
R358
DTA144TS
TR307
C357 1/50
C356 4.7/25
C358 33/6.3
R355
R354 510K
D305
D306
D307
R373 130K
DM.STOP
TR308
R362 2.2K
C359 2.2/50
R363 6.2K
680K
R364
R365 18K
R366 2.2K
R369 F3.3K
R368 F20K
R367 F22K
C360 4.7/35
TR309
DTA144TS
R370 10K
C361 1/50
R371 47K
R372 33K
R374 15K
R375 4.7K
R376 1K
D308
CPD
CFV
CMD
CM.STOP
R349 10K
R330 68K
R331 62K
C328 M0.033
C327 M0.033
C326 0.0047
C325 0.0047
C324 0.0082
C322 22P CH
X301 8M
C323 30P CH
R324 10K
C303 47/6.3
C304 0.01
C305 2.2/50
C306 47/6.3
C307 0.047
L303 100
C308
C309 0.0022
R308 560
R309
R332 10K
C311 2.2/50
C312
R310 10K
R311 10K
C313 47/6.3
C314 4.7/25
R312 1M
C316 1/50
C315 0.01
C317 1/50
R313 10K
C318 1/50
C319 1/50
R314 100K
D301
D302
C321 M0.082
R315 F18K
33K
VR301
SW.F
R316 F36K
TR303 DTA114TS
EM, EOH (Y1) ONLY
R317 10K
DPG
DFG
R318 10K
R319 68K
C330 1/50
TR302 2SC3330
C320 0.01
R320
R321
TR304 DTA144ES
TR305 DTC144ES
R323 1K
IDL5V
R306 10K
C329 0.01
R386 15K
R387 15K
R388 47K
R389 47K
R390 36K
R391 36K
IC304 LA6358
TRP
SRP
R392 56K
R393 56K
R394 100
C369 0.022F/5.5

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W
ALL CAPACITORS IN µF (P=PF)
ALL ELECTROLYTIC CAPACITORS IN µF/WV
ALL DIODES ARE 1SS131T

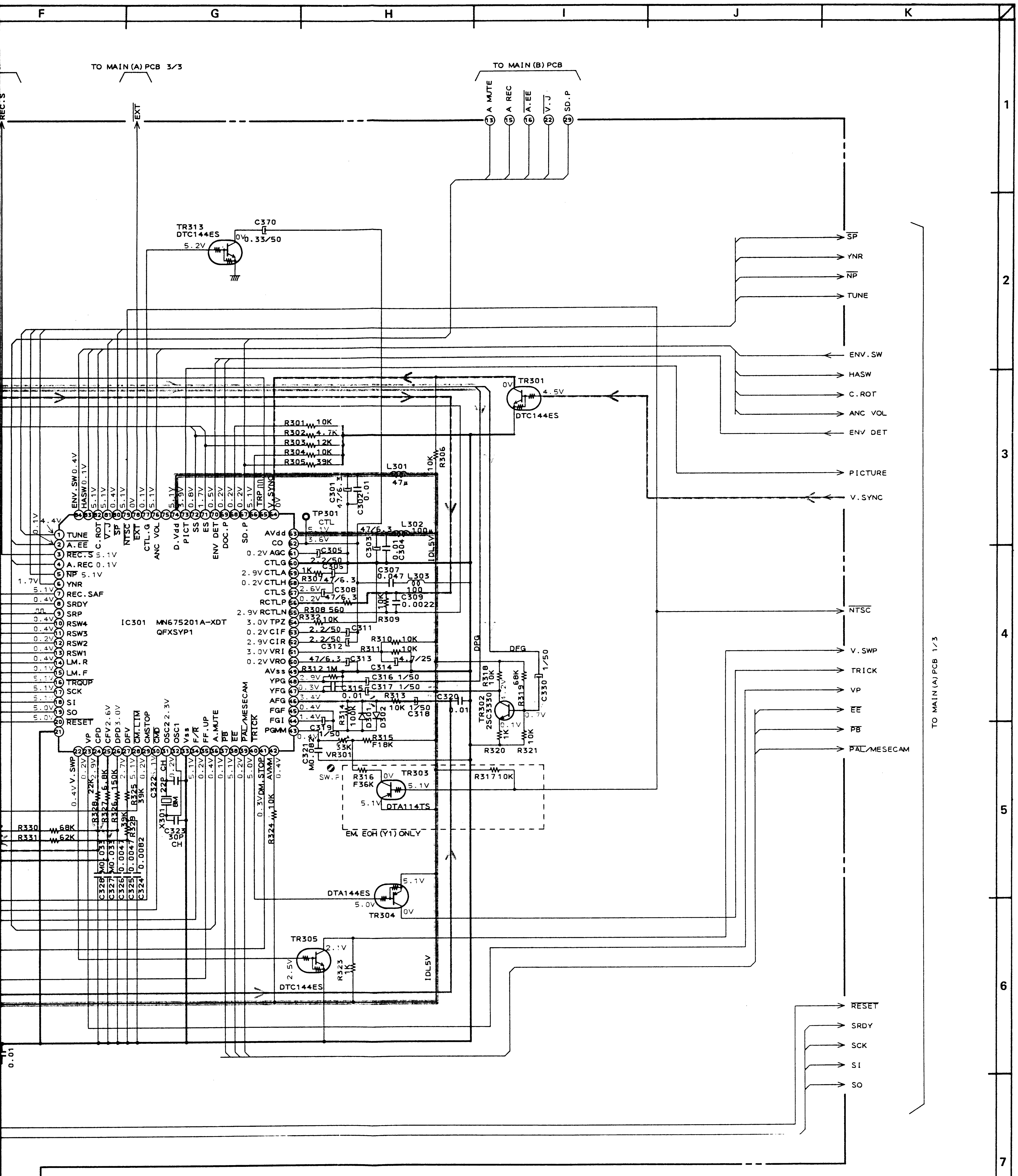
INDICATED VOLTAGES WERE
MEASURED DURING PB MODE.
(TAPE SPEED:SP)

B (POWER SUPPLY) LINE
CAPSTAN MOTOR SPEED CONTROL LINE
CAPSTAN MOTOR PHASE CONTROL LINE
DRUM MOTOR SPEED CONTROL LINE
DRUM MOTOR PHASE CONTROL LINE

WARNING: ⚠ AND ▇ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER' S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ▇, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L' APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

MAIN (A) PCB 2/3 V1130A501A


F
G
H
I
J
K
1
2
3
4
5
6
7
8
TO MAIN (A) PCB 3/3
TO MAIN (B) PCB
REC.S
EXT
A MUTE
A REC
A.EE
V.J
SD.P
TR313
DTC144ES
C370
0.33/50
SP
YNR
NP
TUNE
ENV.SW
HASW
C.ROT
ANC VOL
ENV DET
PICTURE
V.SYNC
NTSC
V.SWP
TRICK
VP
EE
PB
PAL/MESECAM
RESET
SRDY
SCK
SI
SO
TO MAIN (A) PCB 1/3
TR301
DTC144ES
R301 10K
R302 4.7K
R303 12K
R304 10K
R305 39K
R306 10K
L301 47μ
C301 47/6.3
C302 0.01
TP301
L302 100μ
L303 100
C305 2.2/50
C306
C307 0.047
C308 47/6.3
C309 0.0022
R307
R308 560
R309
R310 10K
R311 10K
C311 2.2/50
C312 2.2/50
C313 47/6.3
C314 4.7/25
R312 1M
C315
C316 1/50
C317 1/50
C318 1/50
R313 10K
R314 100K
R315 F18K
D301
D302
C319 1/50
C320 0.01
C321 M0.082
VR301
R316 F36K
R317 10K
R318 10K
R319 68K
R320 1K
R321 10K
C330 1/50
TR302 2SC3330
TR303 DTA114TS
EM, EOH (Y1) ONLY
SW.F
IC301 MN675201A-XDT QFXSYP1
TR304 DTA144ES
TR305 DTC144ES
R323 1K
R324 10K
R325 39K
R326 150K
R327 6.8K
R328 22K
R329
R330 68K
R331 62K
C322 22P CH
C323 30P CH
X301 8M
C324 0.0082
C325 0.0047
C326 0.0047
C327 M0.033
C328 M0.033
IDL5V
DPG
DFG
TUNE
A.EE
REC.S
A.REC
NP
YNR
REC.SAF
SRDY
SRP
RSW4
RSW3
RSW2
RSW1
LM.R
LM.F
TRQUP
SCK
SI
SO
RESET
AVdd
CO
AGC
CTLG
CTLA
CTLH
CTLS
RCTLP
RCTLN
TPZ
CIF
CIR
VRI
VRO
AVss
YPG
YFG
AFG
FGF
FGI
PGMM
VP
CPD
CFV
DPD
DFV
CM.LIM
CMSTOP
CMD
OSC2
OSC1
Vss
F/R
FF.UP
A.MUTE
PB
EE
PAL/MESECAM
TRICK
DM.STOP
AVMM
V.SWP
ENV.SW
HASW
C.ROT
V.J
SP
NTSC
EXT
CTL.G
ANC VOL
D.Vdd
PICT
SS
ES
ENV DET
DOC.P
SD.P
TRP
V.SYNC

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W
ALL CAPACITORS IN μF (P=PF)
ALL ELECTROLYTIC CAPACITORS IN μF/WV
ALL DIODES ARE 1SS131T

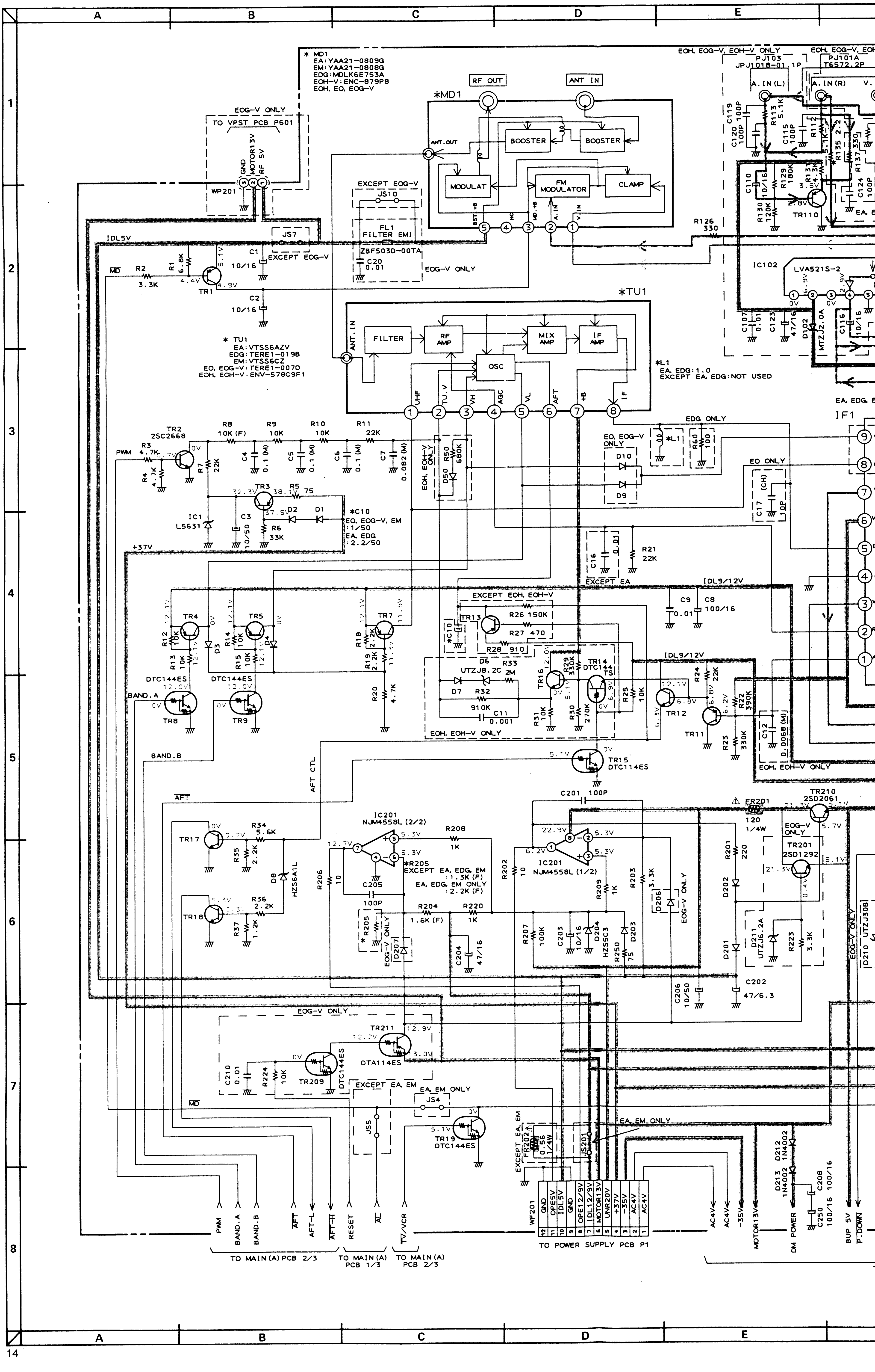
INDICATED VOLTAGES WERE
MEASURED DURING PB MODE.
(TAPE SPEED:SP)

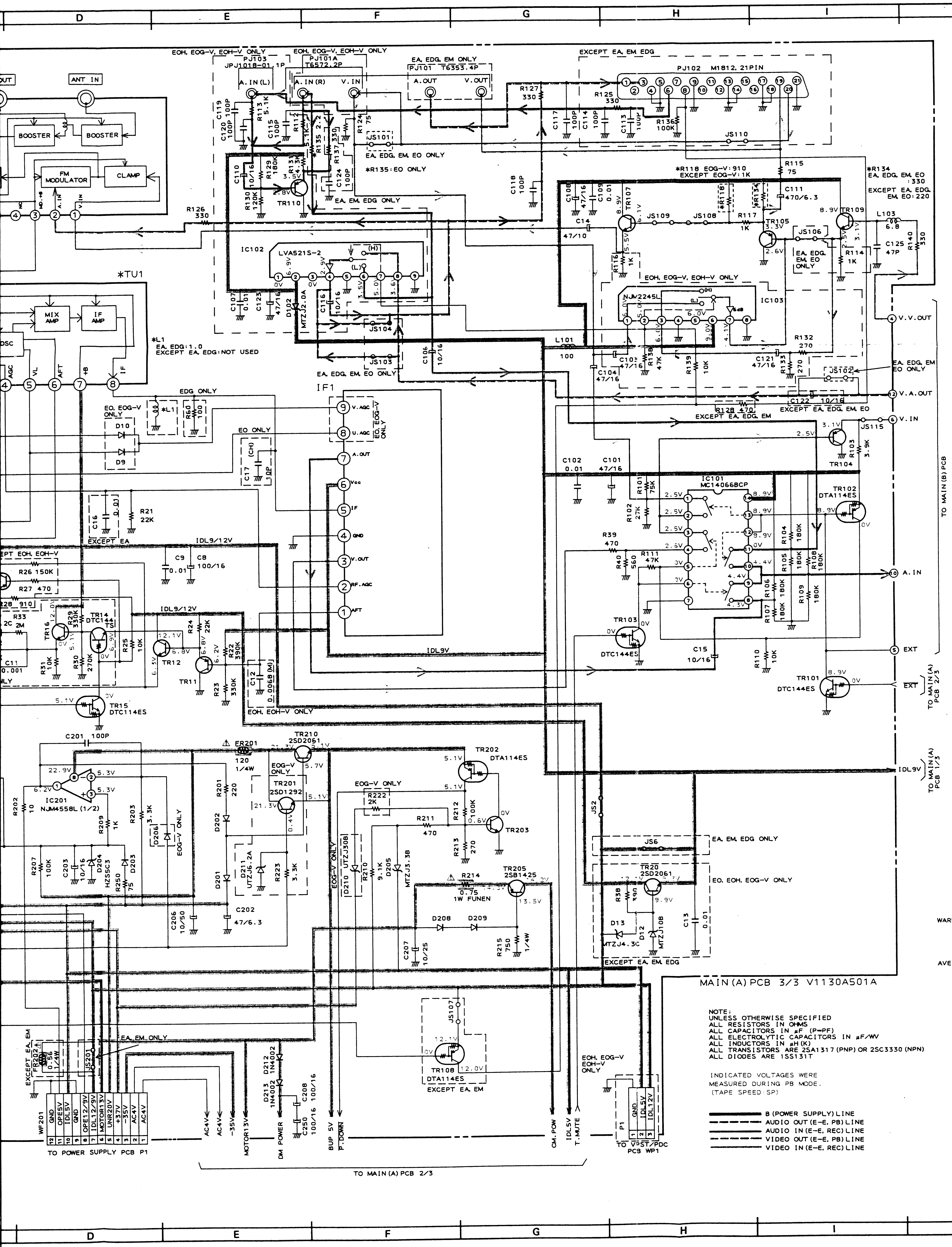
━━━ B (POWER SUPPLY) LINE
— — — CAPSTAN MOTOR SPEED CONTROL LINE
— — — CAPSTAN MOTOR PHASE CONTROL LINE
– – – DRUM MOTOR SPEED CONTROL LINE
-·-·- DRUM MOTOR PHASE CONTROL LINE

WARNING: ⚠ AND ▇ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ▇, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

VS-G51EA/EDG/EM/EO/EOH
VS-G54EOH-V, G55EOG-V
MAIN (A) 2/3
(SERVO SYSCON BLK)
SCHEMATIC DIAGRAM
No.18-3 V117006M
A1


A
B
C
D
E
1
2
3
4
5
6
7
8
* MD1
EA:YAA21-0809G
EM:YAA21-0808G
EDG:MDLK6E753A
EOH-V:ENC-879P8
EOH, EO, EOG-V
*MD1
RF OUT
ANT IN
ANT.OUT
BOOSTER
BOOSTER
MODULAT
FM MODULATOR
CLAMP
EOG-V ONLY
TO VPST PCB P601
GND
MOTOR13V
RF 5V
WP201
EXCEPT EOG-V
JS10
FL1
FILTER EMI
ZBF503D-00TA
C20
0.01
EOG-V ONLY
JS7
EXCEPT EOG-V
IDL5V
MD
R2
3.3K
R1
6.8K
TR1
C1
10/16
C2
10/16
*TU1
* TU1
EA:VTSS6AZV
EDG:TERE1-019B
EM:VTSS6CZ
EO, EOG-V:TERE1-007D
EOH, EOH-V:ENV-578C9F1
ANT.IN
FILTER
RF AMP
MIX AMP
IF AMP
OSC
UHF
TU.V
VH
AGC
VL
AFT
+B
IF
*L1
EA, EDG:1.0
EXCEPT EA, EDG:NOT USED
EOH, EOG-V, EOH-V ONLY
PJ103
JPJ1018-01,1P
A.IN(L)
EOH, EOG-V, EOH
PJ101A
T6572,2P
A.IN(R)
C119 100P
C120 100P
R113 5.1K
C115 100P
R129 180K
C110 10/16
R130 120K
R131 4.3K
TR110
R126 330
IC102
LVA521S-2
C107 0.01
C123 47/16
D102 MTZJ2.0A
C116 10/16
EA, EDG, E
IF1
TR2
2SC2668
PWM
R3 4.7K
R4 4.7K
R7 22K
R8 10K (F)
R9 10K
R10 10K
R11 22K
C4 0.1 (M)
C5 0.1 (M)
C6 0.1 (M)
C7 0.082 (M)
EOH, EOH-V ONLY
R50 680K
D50
EDG ONLY
EO, EOG-V ONLY
D10
D9
*L1
R60 100
EO ONLY
C17 (CH) 10P
TR3
R5 75
R6 33K
D2
D1
IC1
L5631
C3 10/50
*C10
EO, EOG-V, EM :1/50
EA, EDG :2.2/50
+37V
C16 0.01
R21 22K
EXCEPT EA
IDL9/12V
C9 0.01
C8 100/16
EXCEPT EOH, EOH-V
TR13
R26 150K
R27 470
R28 910
*C10
D6
R33 2M
UTZJ8.2C
D7
R32 910K
C11 0.001
EOH, EOH-V ONLY
TR4
TR5
TR7
R12 10K
R13 10K
R14 10K
R15 10K
D3
D4
R18 2.2K
R19 2.2K
R20 4.7K
DTC144ES
DTC144ES
BAND.A
TR8
TR9
BAND.B
TR16
R29 330K
TR14 DTC144TS
R30 270K
R31 10K
R25 10K
IDL9/12V
TR12
R24 22K
TR11
R22 390K
R23 330K
C12 0.0068 (M)
EOH, EOH-V ONLY
TR15 DTC114ES
AFT CTL
AFT
C201 100P
IC201
NJM4558L (2/2)
R208 1K
R206 10
C205 100P
*R205
EXCEPT EA, EDG, EM :1.3K (F)
EA, EDG, EM ONLY :2.2K (F)
R204 1.6K (F)
R220 1K
*R205
EOG-V ONLY
D207
C204 47/16
R202 10
IC201
NJM4558L (1/2)
R209 1K
R203 3.3K
D206
EOG-V ONLY
R207 100K
C203 10/16
D204 HZS5C3
R250 75
D203
C206 10/50
FR201
120 1/4W
TR210 2SD2061
EOG-V ONLY
TR201 2SD1292
R201 220
D202
D201
D211 UTZJ6.2A
R223 3.3K
C202 47/6.3
EOG-V ONLY
D210 UTZJ30B
TR17
R34 5.6K
R35 2.2K
D8 HZS6A1L
TR18
R36 2.2K
R37 1.2K
EOG-V ONLY
TR211
DTA114ES
TR209
DTC144ES
C210 0.01
R224 10K
EXCEPT EA, EM
EA, EM ONLY
JS4
JS5
TR19 DTC144ES
MD
EXCEPT EA, EM
FR202 0.56 1/4W
JS201
EA, EM ONLY
WF201
GND
OPE5V
IDL5V
GND
OPE12/9V
IDL12/9V
MOTOR13V
UNR20V
+37V
-35V
AC4V
AC4V
12 11 10 9 8 7 6 5 4 3 2 1
TO POWER SUPPLY PCB P1
AC4V
AC4V
-35V
MOTOR13V
D212 1N4002
D213 1N4002
C208 100/16
C250 100/16
DM POWER
BUP 5V
P.DOWN
PWM
BAND.A
BAND.B
AFT
AFT-L
AFT-H
RESET
AL
TV/VCR
TO MAIN (A) PCB 2/3
TO MAIN (A) PCB 1/3
TO MAIN (A) PCB 2/3



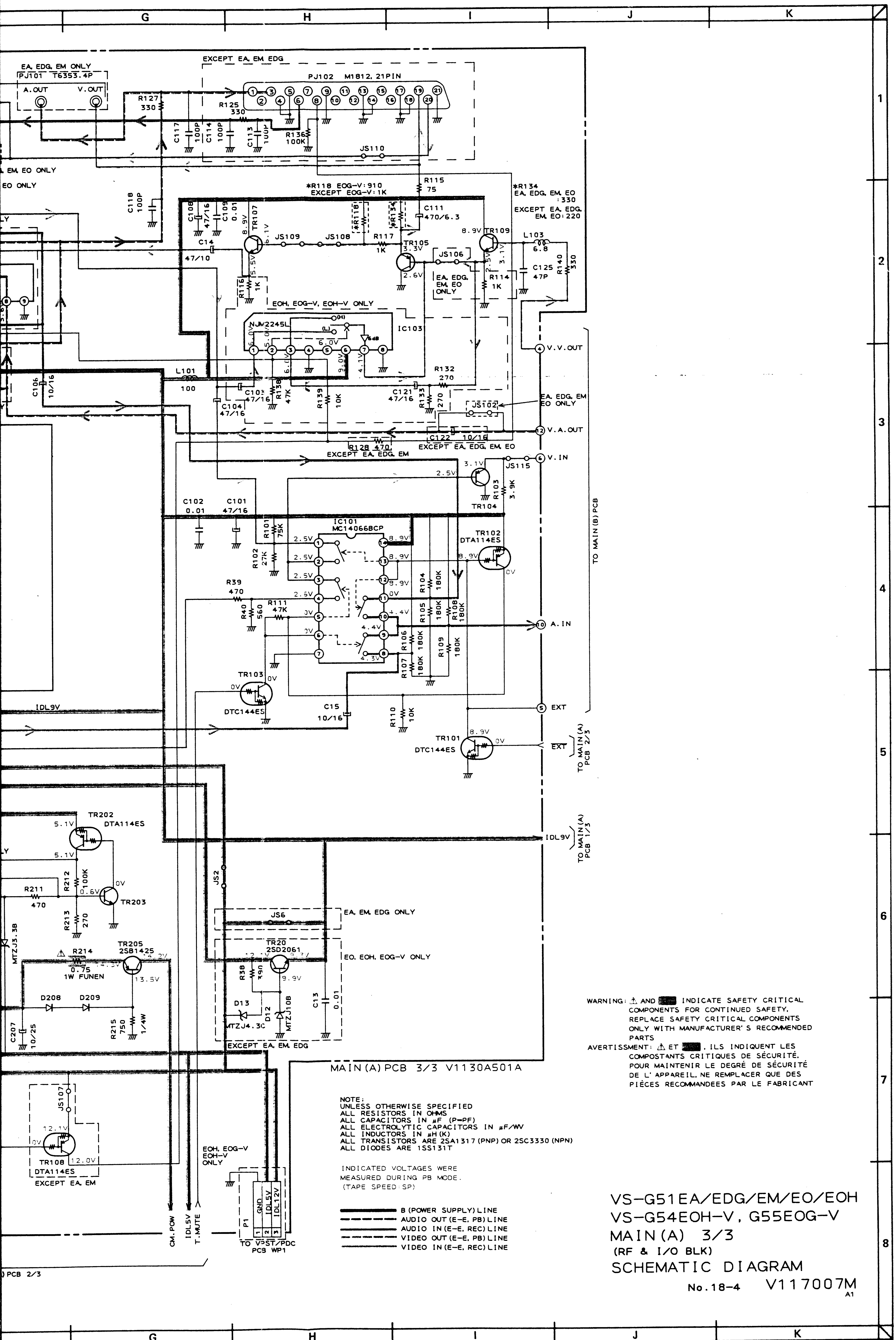
D
E
F
G
H
I
EOH, EOG-V, EOH-V ONLY
PJ103 JPJ1018-01,1P
PJ101A T6572,2P
EA, EDG, EM ONLY
PJ101 T6353,4P
EXCEPT EA, EM EDG
PJ102 M1812, 21PIN
A.IN(L)
A.IN(R)
V.IN
A.OUT
V.OUT
ANT IN
BOOSTER
BOOSTER
FM MODULATOR
CLAMP
*TU1
MIX AMP
IF AMP
OSC
AGC
VL
AFT
+B
IF
*L1 EA, EDG:1.0 EXCEPT EA, EDG:NOT USED
EDG ONLY
EO, EOG-V ONLY
EO ONLY
EXCEPT EA
IF1
V.AGC
U.AGC
A.OUT
Vcc
IF
GND
V.OUT
RF.AGC
AFT
IC102 LVA521S-2
IC103 NJM2245L
IC101 MC14066BCP
IC201 NJM4558L (1/2)
EOH, EOG-V, EOH-V ONLY
*R135:EO ONLY
*R118 EOG-V:910 EXCEPT EOG-V:1K
*R134 EA, EDG, EM, EO :330 EXCEPT EA, EDG, EM, EO:220
EA, EDG, EM, EO ONLY
EA, EM, EDG ONLY
EXCEPT EA, EDG, EM
EXCEPT EA, EDG, EM, EO
EA, EDG, EM EO ONLY
TR101 DTC144ES
TR102 DTA114ES
TR103 DTC144ES
TR104
TR105
TR107
TR109
TR110
TR108 DTA114ES
TR11
TR12
TR14 DTC144ES
TR15 DTC114ES
TR16
TR20 2SD2061
TR201 2SD1292
TR202 DTA114ES
TR203
TR205 2SB1425
TR210 2SD2061
IDL9/12V
IDL9V
EOH, EOH-V ONLY
EOG-V ONLY
EXCEPT EA, EM
EA, EM, EDG ONLY
EO, EOH, EOG-V ONLY
EXCEPT EA, EM EDG
EXCEPT EA, EM
EA, EM ONLY
EOH, EOG-V EOH-V ONLY
V.V.OUT
V.A.OUT
V.IN
A.IN
EXT
TO MAIN (B) PCB
TO MAIN (A) PCB 2/3
TO MAIN (A) PCB 1/3
IDL9V
WF201
GND
OPE5V
IDL5V
GND
OPE12/9V
MOTOR13V
UNR20V
+37V
-35V
AC4V
AC4V
TO POWER SUPPLY PCB P1
AC4V
AC4V
-35V
MOTOR13V
DM POWER
BUP 5V
P.DOWN
CM.POW
IDL5V
T.MUTE
P1
TO VPST/PDC PCB WP1
TO MAIN (A) PCB 2/3
WAR
AVE

MAIN (A) PCB 3/3 V1130A501A

NOTE:
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN µF (P=PF)
ALL ELECTROLYTIC CAPACITORS IN µF/WV
ALL INDUCTORS IN µH (K)
ALL TRANSISTORS ARE 2SA1317 (PNP) OR 2SC3330 (NPN)
ALL DIODES ARE 1SS131T

INDICATED VOLTAGES WERE
MEASURED DURING PB MODE.
(TAPE SPEED: SP)

B (POWER SUPPLY) LINE
AUDIO OUT (E-E, PB) LINE
AUDIO IN (E-E, REC) LINE
VIDEO OUT (E-E, PB) LINE
VIDEO IN (E-E, REC) LINE


G
H
I
J
K
1
2
3
4
5
6
7
8
EA, EDG, EM ONLY
PJ101 T6353.4P
A.OUT
V.OUT
EXCEPT EA, EM, EDG
PJ102 M1812, 21PIN
R127 330
R125 330
C117 100P
C114 100P
C113 100P
R136 100K
JS110
EA, EM, EO ONLY
EO ONLY
C118 100P
*R118 EOG-V: 910 EXCEPT EOG-V: 1K
R115 75
*R134 EA, EDG, EM, EO : 330 EXCEPT EA, EDG, EM, EO: 220
C108 47/16
C109 0.01
TR107
C14 47/10
JS109
JS108
R117 1K
C111 470/6.3
TR105
TR109
L103 6.8
C125 47P
R140 330
JS106
EA, EDG, EM, EO ONLY
R114 1K
R116 1K
EOH, EOG-V, EOH-V ONLY
NJM2245L
IC103
L101 100
C106 10/16
C103 47/16
C104 47/16
R138 47K
R139 10K
C121 47/16
R132 270
R133 270
JS102
EA, EDG, EM EO ONLY
C122 10/16
R128 470
EXCEPT EA, EDG, EM
EXCEPT EA, EDG, EM, EO
V.V.OUT
V.A.OUT
V.IN
JS115
TR104
R103 3.9K
C102 0.01
C101 47/16
IC101 MC14066BCP
R101 75K
R102 27K
TR102 DTA114ES
R39 470
R40 560
R111 47K
R104 180K
R105 180K
R108 180K
R106 180K
R107 180K
R109 180K
A.IN
TR103 DTC144ES
C15 10/16
R110 10K
EXT
TO MAIN (B) PCB
TR101 DTC144ES
EXT
TO MAIN (A) PCB 2/3
IDL9V
TO MAIN (A) PCB 1/3
TR202 DTA114ES
R212 100K
R211 470
TR203
R213 270
JS2
JS6
EA, EM, EDG ONLY
TR20 2SD2061
EO, EOH, EOG-V ONLY
R38 390
D13 MTZJ4.3C
D12 MTZJ10B
C13 0.01
EXCEPT EA, EM, EDG
⚠ R214 0.75 1W FUNEN
TR205 2SB1425
D208
D209
MTZJ3.3B
C207 10/25
R215 750 1/4W
JS107
TR108 DTA114ES
EXCEPT EA, EM
EOH, EOG-V EOH-V ONLY
P1
GND
IDL5V
IDL12V
TO V.PST/PDC PCB WP1
CM.POW
IDL5V
T.MUTE
PCB 2/3

MAIN (A) PCB 3/3 V1130A501A

WARNING: ⚠ AND ■ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ■, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

NOTE:
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN μF (P=PF)
ALL ELECTROLYTIC CAPACITORS IN μF/WV
ALL INDUCTORS IN μH (K)
ALL TRANSISTORS ARE 2SA1317 (PNP) OR 2SC3330 (NPN)
ALL DIODES ARE 1SS131T

INDICATED VOLTAGES WERE MEASURED DURING PB MODE. (TAPE SPEED: SP)

━━━━ B (POWER SUPPLY) LINE
– – – – AUDIO OUT (E-E, PB) LINE
──── AUDIO IN (E-E, REC) LINE
- - - - VIDEO OUT (E-E, PB) LINE
──── VIDEO IN (E-E, REC) LINE

VS-G51EA/EDG/EM/EO/EOH
VS-G54EOH-V, G55EOG-V
MAIN (A) 3/3
(RF & I/O BLK)
SCHEMATIC DIAGRAM

No.18-4 V117007M
A1

PRINCIPAL PARTS LOCATION

ICs

IC101	D5
IC102	D,E5
IC103	D5
IC201	F4,5
IC301	E1,2
IC302	F1,2
IC303	E,F3
IC304	F2
IC400	C3
IC401	C,D4
IC402	C,D1
IC403	C5

WF & WPs

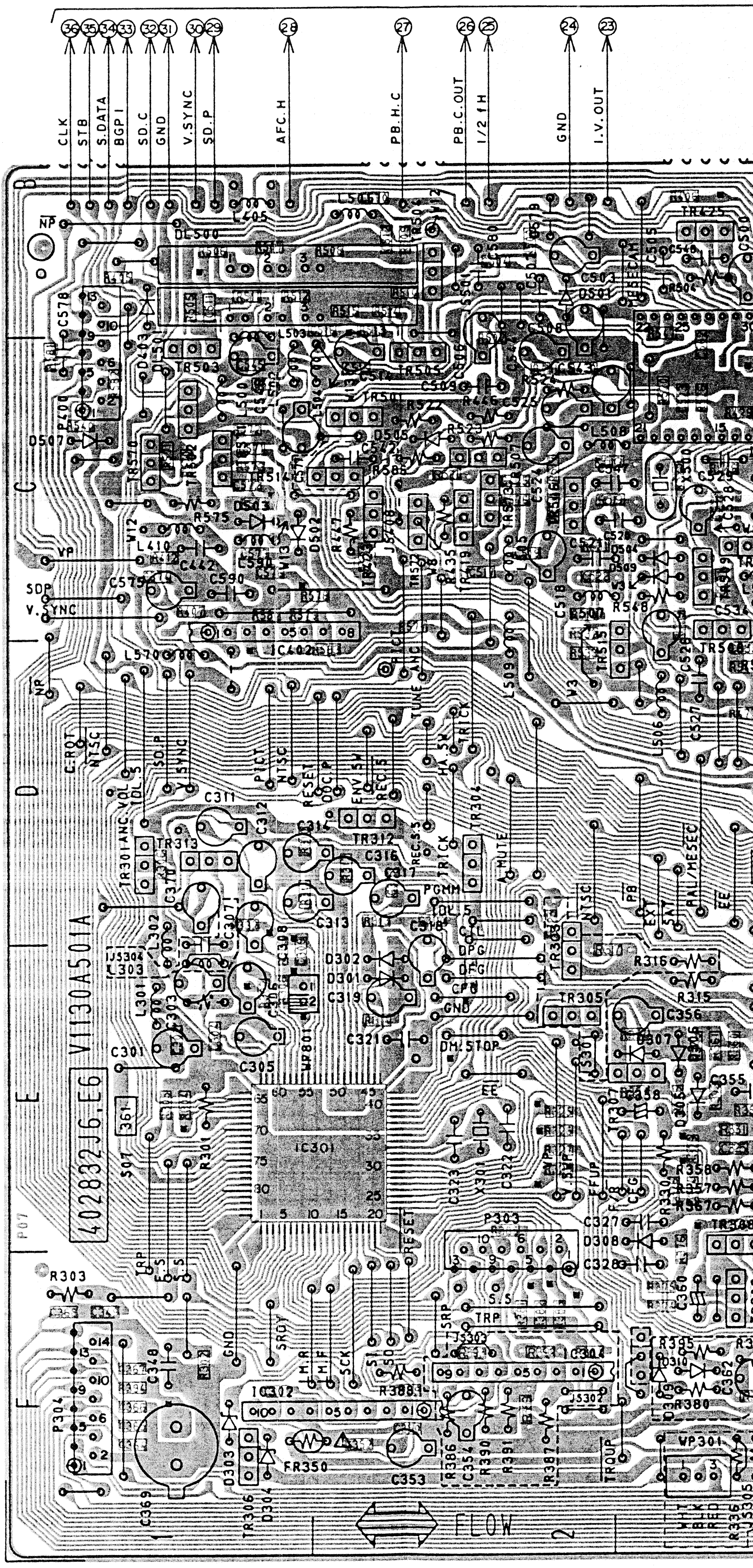
WF201	F4,5
WP301	F3
WP801	E1,2

CONNECTORs

P1	E,F5
P250	F4
P301	E3
P302	F4
P303	E2
P304	F1
P400	B,C1
P401	D5

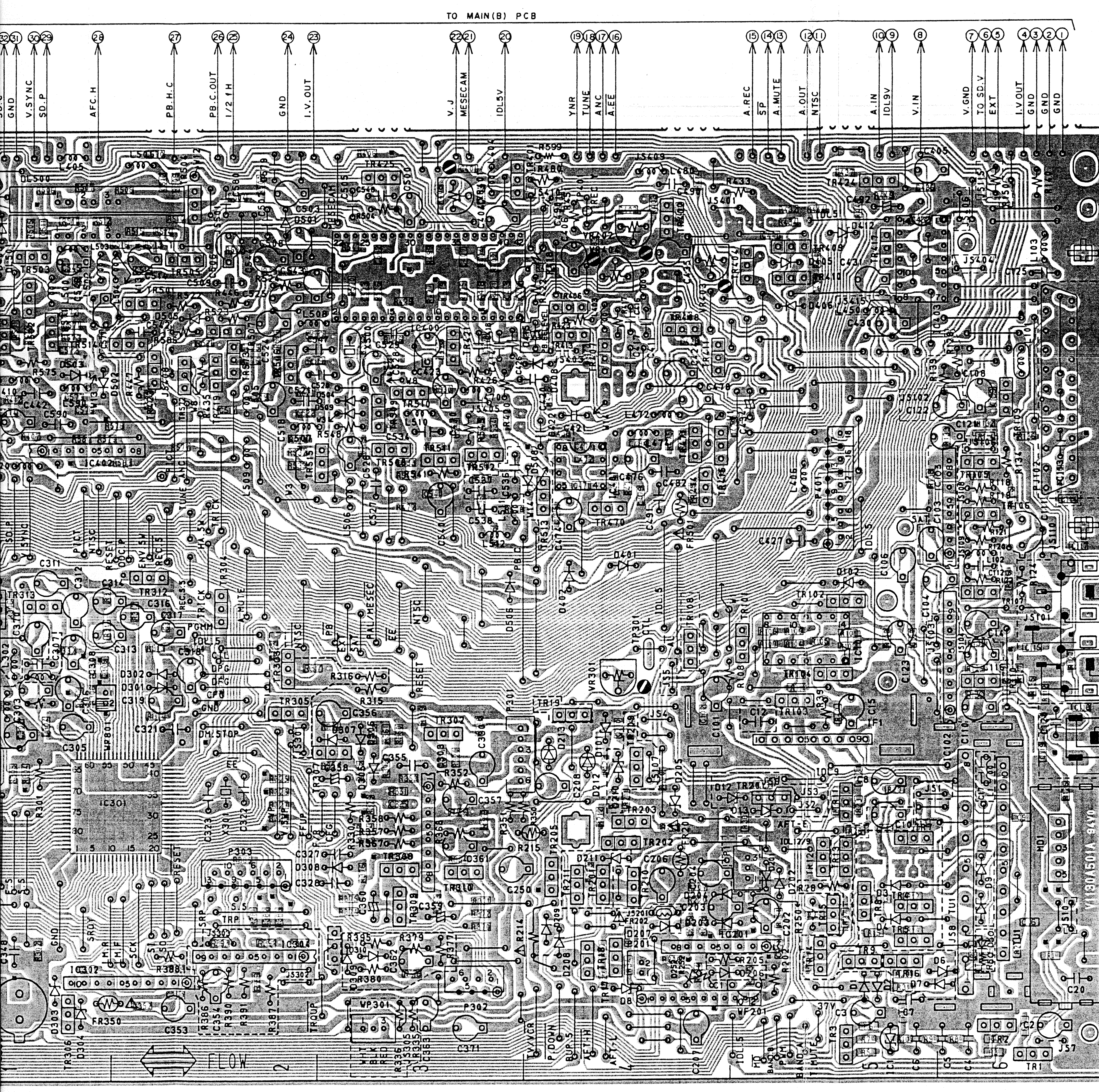
TRANSISTORs

TR1	F6
TR2	F6
TR3	F5
TR4	F5
TR5	F5
TR6	F5
TR7	E5
TR8	F5
TR9	F5
TR11	E5
TR12	E5
TR13	E,F5
TR14	F5
TR15	F5
TR16	F5
TR17	F4
TR18	F4
TR19	E4
TR20	E5
TR101	D5
TR102	D5
TR103	E5
TR104	E5
TR105	D6
TR107	D6
TR108	D4
TR109	C6
TR110	E6
TR201	F4
TR202	E4
TR203	E4
TR205	E,F4
TR209	F4
TR210	E,F4
TR211	F4
TR301	D1
TR302	E3
TR303	D,E2
TR304	D2
TR305	E2
TR306	F1
TR307	E3
TR308	E,F4
TR309	F3
TR310	E,F3
TR313	D1
TR401	B3
TR402	B4
TR404	C5
TR406	C4
TR407	C4
TR408	C4
TR409	C5
TR410	C5
TR411	C4
TR413	C4
TR414	D4
TR415	C4
TR417	C5
TR419	C2
TR421	C3
TR423	C2
TR424	B5
TR425	B3
TR470	D4
TR471	C4
TR501	C2
TR502	C1
TR503	C1
TR504	C1
TR505	C2
TR506	C2
TR507	C2
TR508	C,D3
TR509	C3
TR510	C3
TR511	D3
TR512	C,D3
TR513	D4
TR514	C2
TR515	C2
TR570	C1
TR571	C1
TR572	C2
TR573	C2


㊱ CLK
㉟ STB
㉞ S.DATA
㉝ BGP I
㉜ SD.C
㉛ GND
㉚ V.SYNC
㉙ SD.P
㉘ AFC.H
㉗ PB.H.C
㉖ PB.C.OUT
㉕ 1/2 fH
㉔ GND
㉓ I.V.OUT
B
C
D
E
F
IC301
IC302
IC304
IC402
P303
P304
VP301
WP801
FR350
V1130A501A
40283216.E6
FLOW
1
2

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY,
REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S
RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ.
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL,
NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

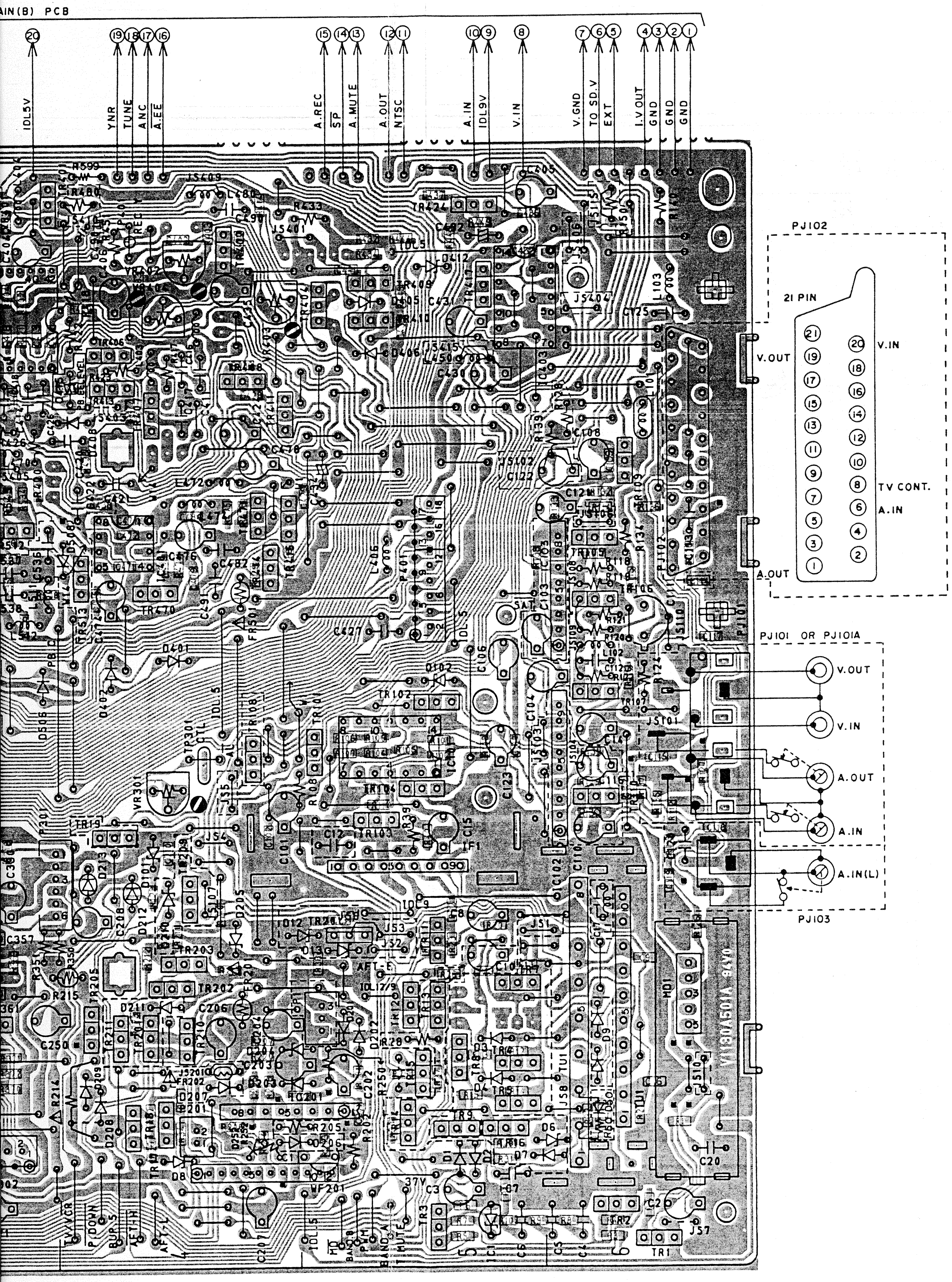

TO MAIN(B) PCB
GND
V.SYNC
SD.P
AFC.H
PB.H.C
PB.C.OUT
1/2 1H
GND
I.V.OUT
V.J
MESECAM
IDL5V
YNR
TUNE
ANC
A.EE
A.REC
SP
A.MUTE
A.OUT
NTSC
A.IN
IDL9V
V.IN
V.GND
TO SD.V
EXT
I.V.OUT
GND
GND
GND
IC301
IC302
FLOW

MAIN(A) PCB V1130A501A(J6)

NG: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY,
REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S
RECOMMENDED PARTS

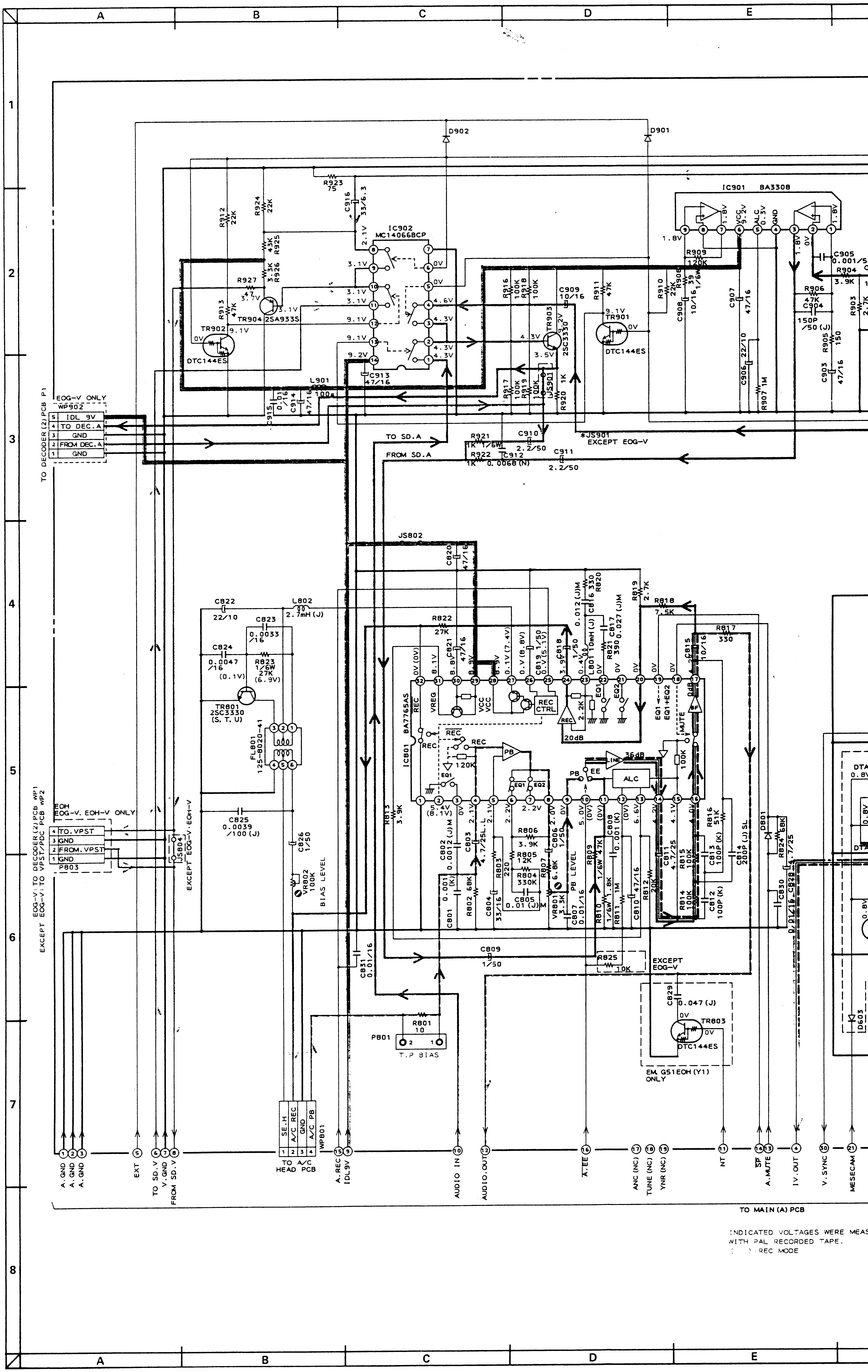
SSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ.
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL,
NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

NOTE : PARTS DIFFER DEPENDING ON MODEL NU
REFER TO SCHEMATIC DIAGRAMS FOR PERT
PARTS INFORMATION.

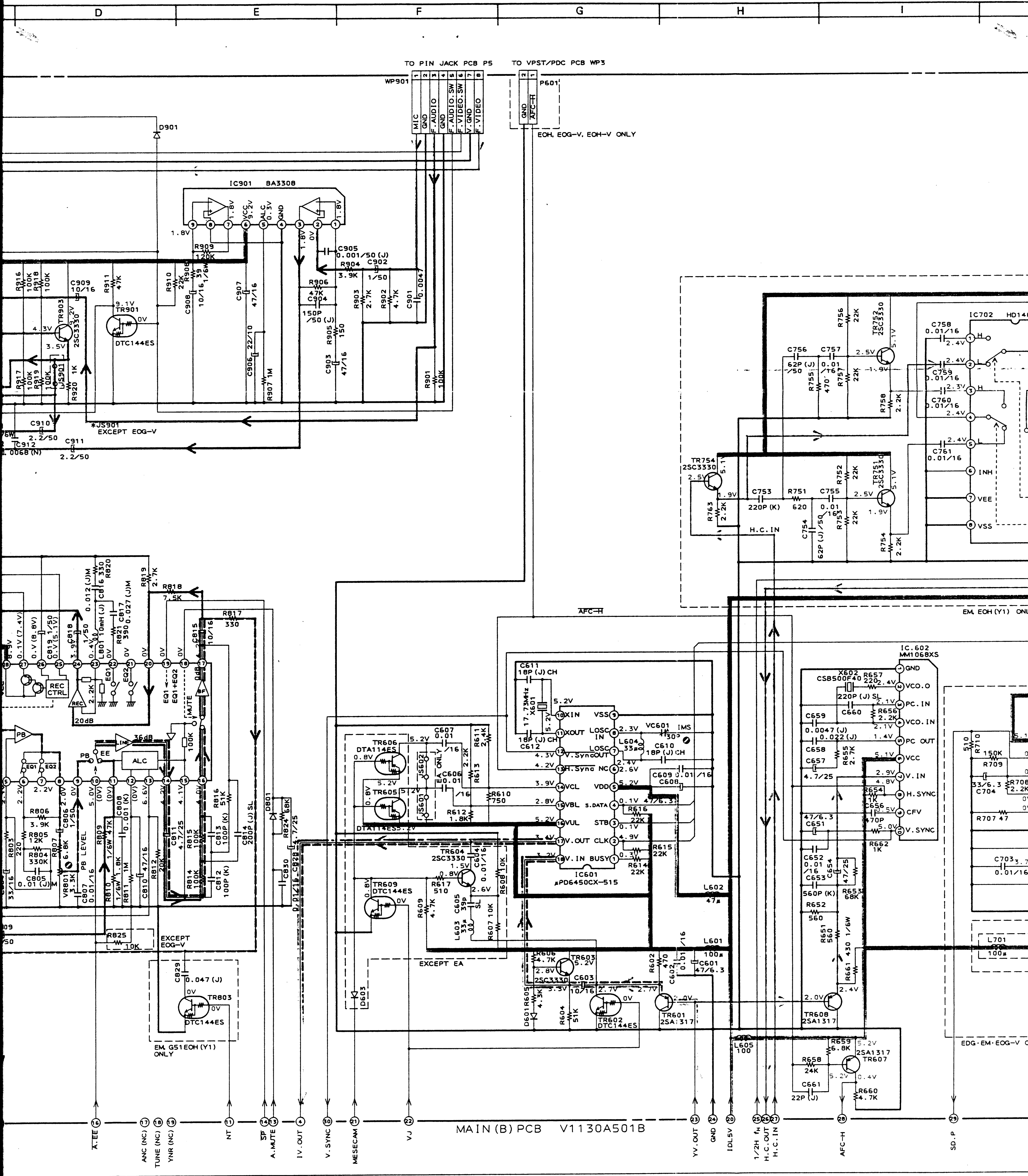

AIN(B) PCB
⑳ IDL5V
⑲ YNR
⑱ TUNE
⑰ ANC
⑯ A.EE
⑮ A.REC
⑭ SP
⑬ A.MUTE
⑫ A.OUT
⑪ NTSC
⑩ A.IN
⑨ IDL9V
⑧ V.IN
⑦ V.GND
⑥ TO SD.V
⑤ EXT
④ I.V OUT
③ GND
② GND
① GND
PJ102
21 PIN
V.OUT
V.IN
TV CONT.
A.IN
A.OUT
PJ101 OR PJ101A
V.OUT
V.IN
A.OUT
A.IN
A.IN(L)
PJ103
VI130A501A 94V0

N(A) PCB   VI130A501A(J6)

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER.
REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT
PARTS INFORMATION.


A
B
C
D
E
1
2
3
4
5
6
7
8
D902
D901
R923 75
C916 33/6.3
IC901 BA3308
VCC 9.2V
ALC 0.3V
GND
IC902 MC14066BCP
R912 22K
R924 22K
R925 43K
R926 3.3K
R927 47
R913 47K
TR902 DTC144ES
TR904 2SA933S
R916 100K
R918 100K
C909 10/16
R911 47K
TR903 2SC3330
TR901 DTC144ES
R910 22K
R908 10/16.39
R909 120K
C908
C907 47/16
C906 22/10
R907 1M
C905 0.001/5
R904 3.9K
R906 47K
C904 150P /50 (J)
R905 150
C903 47/16
R903 2.7K
L901 100μ
C913 47/16
C914 47/16
C915 0.01/16
R917 100K
R919 100K
JS901
R920 1K
*JS901 EXCEPT EOG-V
TO SD.A
FROM SD.A
R921 1K 1/6W
R922 1K
C910 2.2/50
C912 0.0068 (N)
C911 2.2/50
TO DECODER (2) PCB P1
EOG-V ONLY
WP902
IDL 9V
TO DEC.A
GND
FROM DEC.A
GND
JS802
C820 47/16
C822 22/10
L802 2.7mH (J)
C823 0.0033 /16
C824 0.0047 /16
R823 1/6W 27K
TR801 2SC3330 (S, T, U)
FL801 125-8020-41
C825 0.0039 /100 (J)
C826 1/50
VR802 100K BIAS LEVEL
EXCEPT EOG-V, EOH-V
JS804
EOG-V: TO DECODER (2) PCB WP1
EXCEPT EOG-V: TO VPST/PDC PCB WP2
EOH
EOG-V, EOH-V ONLY
TO.VPST
GND
FROM.VPST
GND
P803
R822 27K
C821 47/16
IC801 BA7765AS
REC
VREG
VCC
REC CTRL
EQ1
EQ2
20dB
PB
EE
LINE
36dB
ALC
MUTE
EQ1+EQ2
R820 330
C816 0.012 (J)M
L801 10mH (J)
C818 1/50
C819 1/50
R821 390
C817 0.027 (J)M
R819 2.7K
R818 7.5K
C815 10/16
R817 330
R813 3.9K
120K
C802 0.0012 (J)M
C801 0.001 (K)
R802 68K
C803 4.7/25L.L
R803 220
C804 33/16
R806 3.9K
R805 12K
R804 330K
C805 0.01 (J)M
R807 6.8K
C806 1/50
VR801 3.3K PB LEVEL
C807 0.01/16
R809 1/6W 47K
R810 1.8K
R811 1M
C808 0.001 (K)
C810 47/16
R812 20K
C811 4.7/25
R815 100K
R814 100K
R816 51K
C813 100P (K)
C812 100P (K)
C814 200P (J) SL
D801
R824 68K
C830 0.01/16
C828 4.7/25
C831 0.01/16
C809 1/50
R825 10K
EXCEPT EOG-V
C829 0.047 (J)
TR803 DTC144ES
EM. G51EOH (Y1) ONLY
R801 10
P801
T.P BIAS
SE.H
A/C REC
GND
A/C PB
WP801
TO A/C HEAD PCB
A.GND
A.GND
A.GND
EXT
TO SD.V
V.GND
FROM SD.V
A.REC
IDL9V
AUDIO IN
AUDIO.OUT
A.EE
ANC (NC)
TUNE (NC)
YNR (NC)
NT
SP
A.MUTE
IV.OUT
V.SYNC
MESECAM
DTA
D603
TO MAIN (A) PCB

INDICATED VOLTAGES WERE MEAS
WITH PAL RECORDED TAPE.
( ) : REC MODE


D
E
F
G
H
I
TO PIN JACK PCB P5
TO VPST/PDC PCB WP3
WP901
P601
MIC
GND
F.AUDIO
GND
F.AUDIO.SW
F.VIDEO.SW
V.GND
F.VIDEO
GND
AFC-H
EOH, EOG-V, EOH-V ONLY
D901
IC901 BA3308
VCC 9.2V
ALC 0.3V
GND
TR903 2SC3330
TR901 DTC144ES
*JS901 EXCEPT EOG-V
TR754 2SC3330
TR752 2SC3330
TR751 2SC3330
IC702 HD14
INH
VEE
VSS
H.C.IN
EM, EOH(Y1) ONLY
REC CTRL
20dB
PB
EQ1
EQ2
EQ1+EQ2
MUTE
36dB
LINE
PB
EE
ALC
PB LEVEL
EXCEPT EOG-V
TR803 DTC144ES
EM, G51EOH(Y1) ONLY
AFC-H
IC601 µPD6450CX-515
XIN
XOUT
V.Sync
H.Sync
VCL
VBL
VUL
V.OUT
V.IN
VSS
LOSC IN
LOSC OUT
NC
VDD
S.DATA
STB
CLK
BUSY
X601 17.73MHz
VC601 IMS
TR606 DTA114ES
TR605 DTA114ES
EA ONLY
TR604 2SC3330
TR609 DTC144ES
EXCEPT EA
TR603 2SC3330
TR602 DTC144ES
TR601 2SA1317
IC602 MM1068XS
GND
VCO.O
PC.IN
VCO.IN
PC OUT
VCC
V.IN
H.SYNC
CFV
V.SYNC
X602 CSB500F40
TR608 2SA1317
TR607 2SA1317
EDG·EM·EOG-V O
A.EE
ANC (NC)
TUNE (NC)
YNR (NC)
NT
SP
A.MUTE
IV.OUT
V.SYNC
MESECAM
VJ
MAIN (B) PCB V1130A501B
YV.OUT
GND
IDL5V
1/2H fH
H.C.OUT
H.C.IN
AFC-H
SD.P

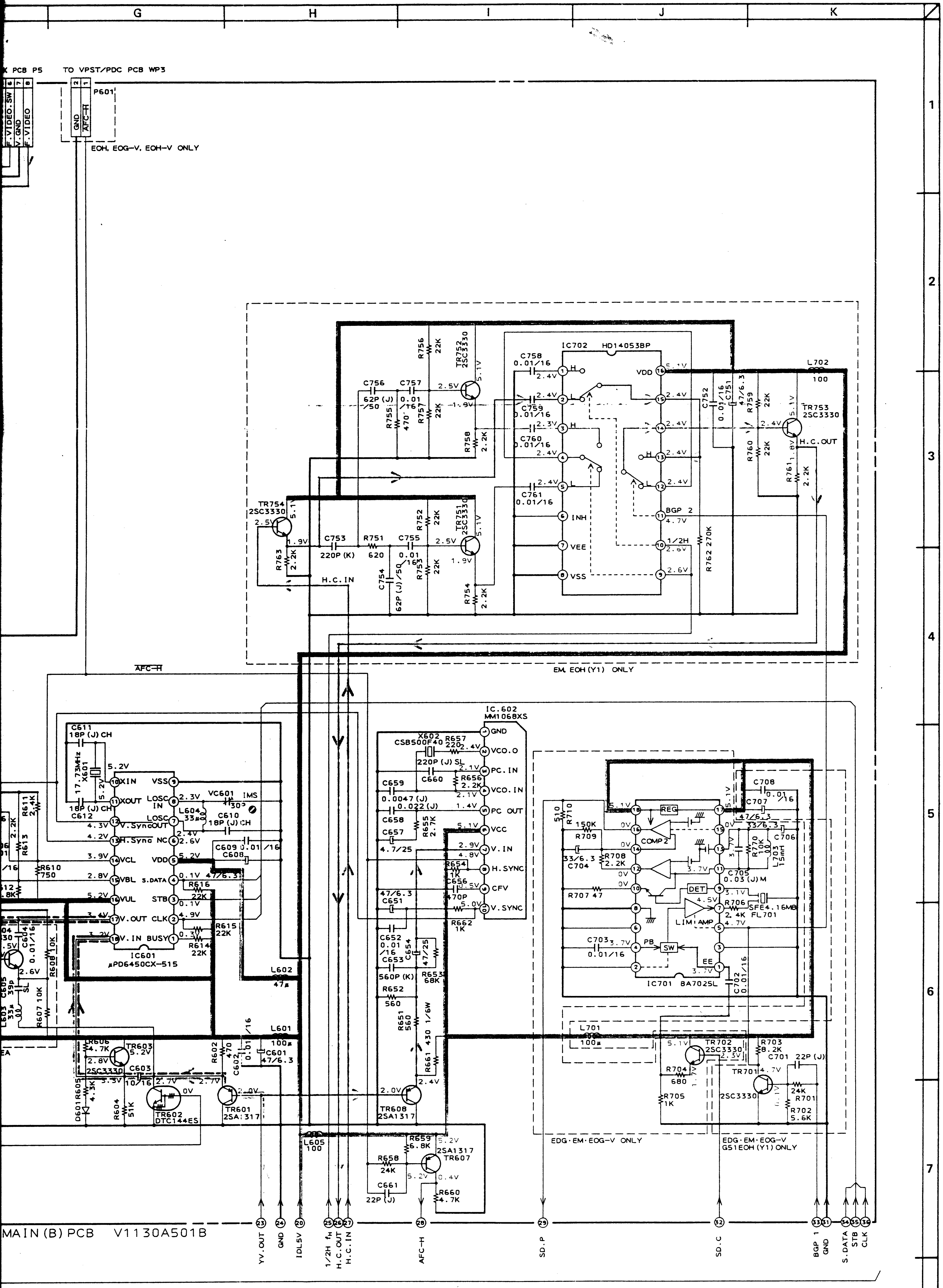
TO MAIN (A) PCB

INDICATED VOLTAGES WERE MEASURED DURING PB MODE
WITH PAL RECORDED TAPE.
( ) : REC MODE

B (POWER SUPPLY) LINE
PB AUDIO SIGNAL LINE
REC AUDIO SIGNAL LINE
PB Y SIGNAL LINE
PB CHROMA SIGNAL LINE
VIDEO IN (REC, E-E) SIGNAL LINE

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN µF
ALL DIODE ARE 1SS131T

D E F G H I


G
H
I
J
K
1
2
3
4
5
6
7
PCB P5
TO VPST/PDC PCB WP3
F.VIDEO.SW
V.GND
F.VIDEO
GND
AFC-H
P601
EOH, EOG-V, EOH-V ONLY
IC702 HD14053BP
VDD
INH
VEE
VSS
BGP 2
1/2H
TR752 2SC3330
TR751 2SC3330
TR753 2SC3330
TR754 2SC3330
L702 100
H.C.OUT
H.C.IN
R762 270K
EM, EOH (Y1) ONLY
AFC-H
IC.602 MM1068XS
GND
VCO.O
PC.IN
VCO.IN
PC OUT
VCC
V.IN
H.SYNC
CFV
V.SYNC
X602 CSB500F40
C611 18P (J) CH
X601 17.734MHz
XIN
XOUT
LOSC IN
LOSC OUT
V.Sync OUT
H.Sync NC
VCL
VDD
VBL
S.DATA
VUL
STB
V.OUT
CLK
V.IN
BUSY
IC601 µPD6450CX-515
VC601 IMS
L604 33µ
L602 47µ
L601 100µ
L605 100
TR601 2SA1317
TR602 DTC144ES
TR603 2SC3330
TR608 2SA1317
TR607 2SA1317
D601
IC701 8A7025L
REG
COMP 2
DET
LIM AMP
PB
SW
EE
SFE4.16MB FL701
L703 15mH
L701 100µ
TR702 2SC3330
TR701 2SC3330
EDG·EM·EOG-V ONLY
EDG·EM·EOG-V G51EOH (Y1) ONLY
MAIN (B) PCB V1130A501B
YV.OUT
GND
IDLSV
1/2H fH
H.C.OUT
H.C.IN
AFC-H
SD.P
SD.C
BGP 1
GND
S.DATA
STB
CLK

DE

B (POWER SUPPLY) LINE
PB AUDIO SIGNAL LINE
REC AUDIO SIGNAL LINE
PB Y SIGNAL LINE
PB CHROMA SIGNAL LINE
VIDEO IN (REC, E-E) SIGNAL LINE

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN µF
ALL DIODE ARE 1SS131T

VS-G51EA/EDG/EM/EO/EOH
VS-G54EOH-V, G55EOG-V
MAIN (B)
(AUDIO, NTSC, IMS & SECAM DET BLK)
SCHEMATIC DIAGRAM
No.18-5 V117008M
A1

PRINCIPAL PARTS LOCATION

ICs

IC601	A3
IC602	A1
IC701	A1
IC702	A2
IC801	A4
IC901	A5
IC902	A6

CONNECTORs

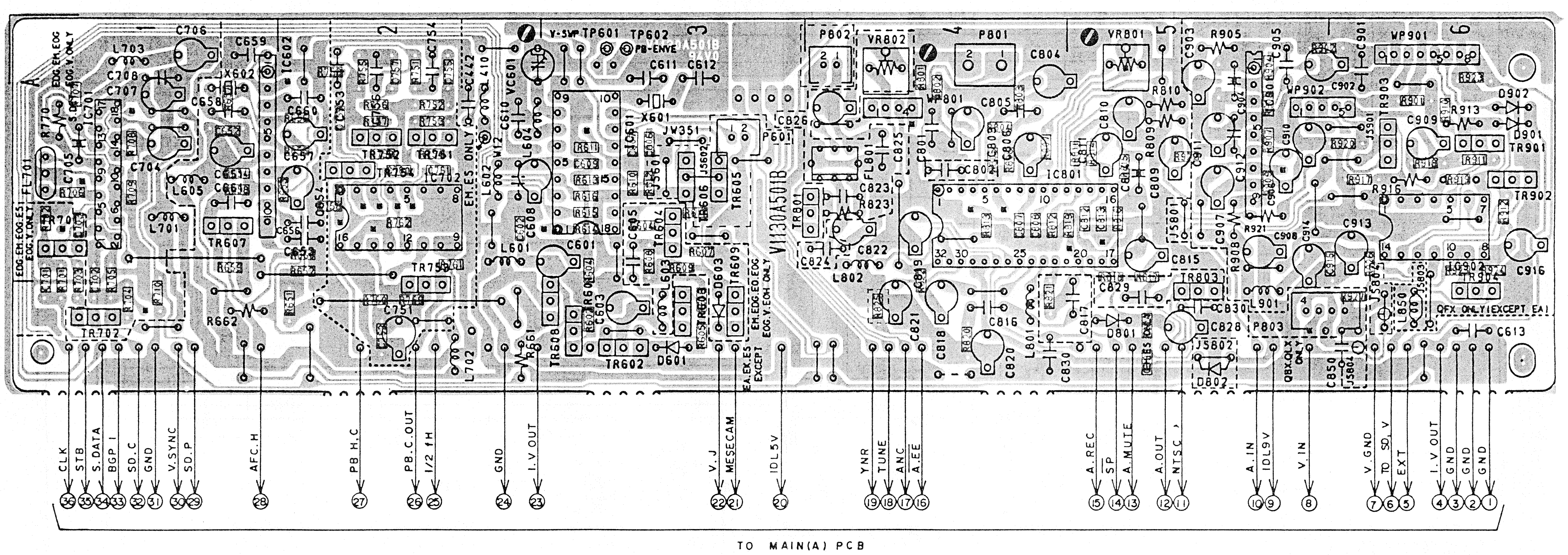
P601	A3
P801	A4
P802	A4
P803	A5,6

WPs

WP801	A4
WP901	A6
WP902	A5,6

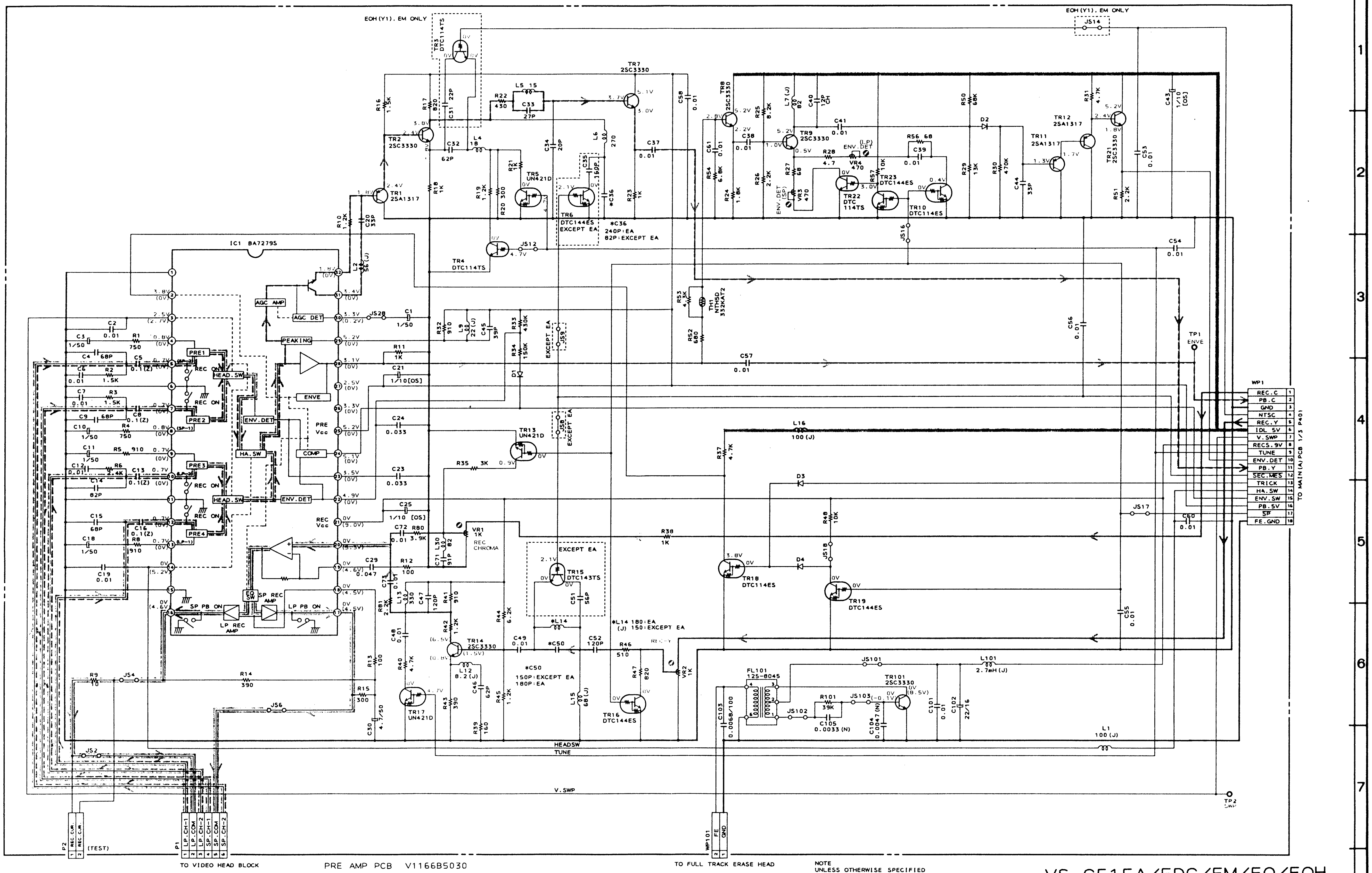
TRANSISTORs

TR601	A3
TR602	A3
TR603	A3
TR604	A3
TR605	A3
TR606	A3
TR607	A1
TR608	A3
TR609	A3
TR701	A1
TR702	A1
TR751	A2
TR752	A2
TR753	A2
TR754	A2
TR801	A4
TR803	B5
TR901	A6
TR902	A6
TR903	A6
TR904	B6


CLK
STB
S.DATA
BGP I
SD.C
GND
V.SYNC
SD.P
AFC.H
PB H.C
PB.C.OUT
1/2 fH
GND
I.V OUT
V.J
MESECAM
IDL5V
YNR
TUNE
ANC
A.EE
A.REC
SP
A.MUTE
A.OUT
NTSC
A.IN
IDL9V
V.IN
V.GND
TO SD.V
EXT
I.V OUT
GND
GND
GND
TO MAIN(A) PCB

MAIN(B) PCB V1130A501B(J6)

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER. REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.


EOH(Y1), EM ONLY
TR3 DTC114TS
TR7 2SC3330
TR2 2SC3330
TR1 2SA1317
TR4 DTC114TS
TR5 UN4210
TR6 DTC144ES EXCEPT EA
*C36 240P:EA 82P:EXCEPT EA
TR8 2SC3330
TR9 2SC3330
TR22 DTC 114TS
TR23 DTC144ES
TR10 DTC114ES
TR11 2SA1317
TR12 2SA1317
TR21 2SC3330
JS14
IC1 BA7279S
AGC AMP
AGC DET
PEAKING
ENVE
PRE Vcc
ENV.DET
HA.SW
COMP
HEAD.SW
PRE1
PRE2
PRE3
PRE4
REC ON
REC Vcc
SP PB ON
LP PB ON
LP REC AMP
SP REC AMP
TH1 NTSD 352KAT2
EXCEPT EA
TR13 UN421D
TR14 2SC3330
TR15 DTC143TS
TR16 DTC144ES
TR17 UN421D
TR18 DTC114ES
TR19 DTC144ES
TR101 2SC3330
FL101 125-8045
*L14 180:EA (J) 150:EXCEPT EA
*C50 150P:EXCEPT EA 180P:EA
VR1 1K REC CHROMA
VR2 1K
VR3 470
VR4 470
ENV.DET (SP)
ENV.DET (LP)
TP1 ENVE
TP2 SWP
WP1
REC.C
PB.C
GND
NTSC
REC.Y
IDL 5V
V.SWP
RECS.9V
TUNE
ENV.DET
PB.Y
SEC.MES
TRICK
HA.SW
ENV.SW
PB.5V
SP
FE.GND
TO MAIN(A)PCB 1/3 P401
HEADSW
TUNE
V.SWP
P2
REC C.W
REC C.W
(TEST)
P1
LP.CH-1
LP.COM
LP.CH-2
SP.CH-1
SP.COM
SP.CH-2
TO VIDEO HEAD BLOCK
PRE AMP PCB V1166B5030
WP101
FE
GND
TO FULL TRACK ERASE HEAD

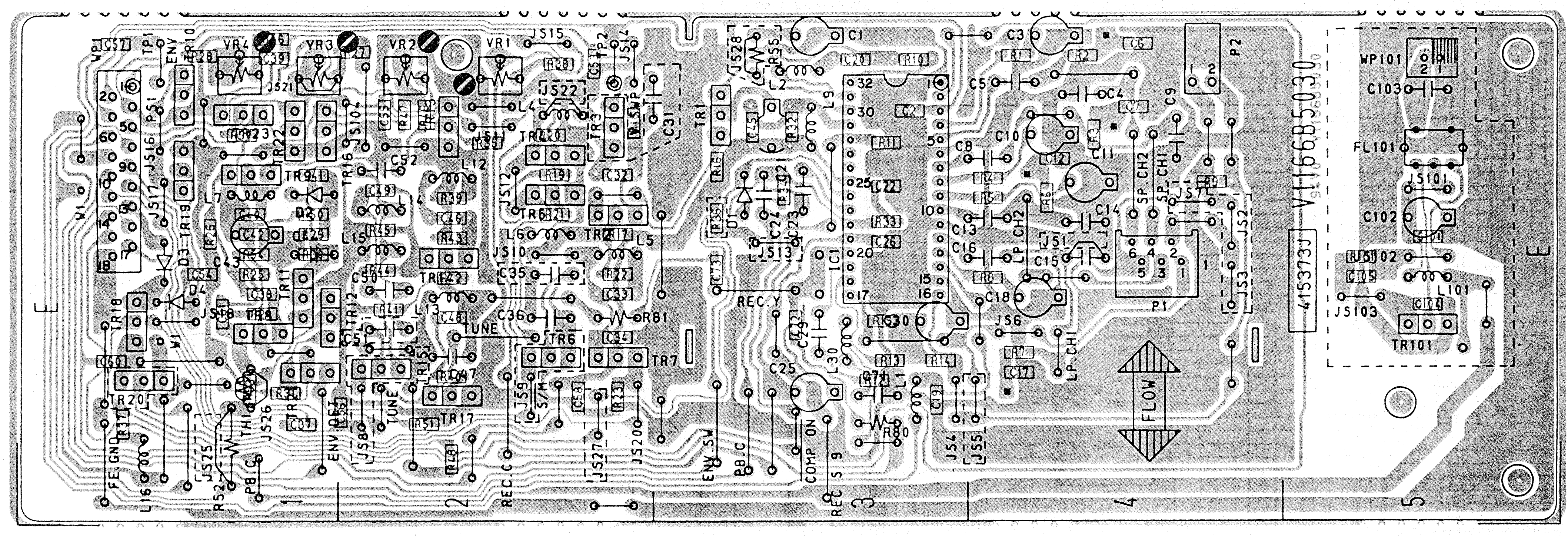
B (POWER SUPPLY) LINE
PB Y SIGNAL LINE
REC Y SIGNAL LINE
PB CHROMA SIGNAL LINE
REC CHROMA SIGNAL LINE

INDICATED VOLTAGES WERE MEASURED DURING PB MODE.
( ) : REC MODE

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN µF (P=PF)
ALL ELECTROLYTIC CAPACITORS IN µF/WV
ALL INDUCTORS IN µH
ALL DIODES ARE 1SS131

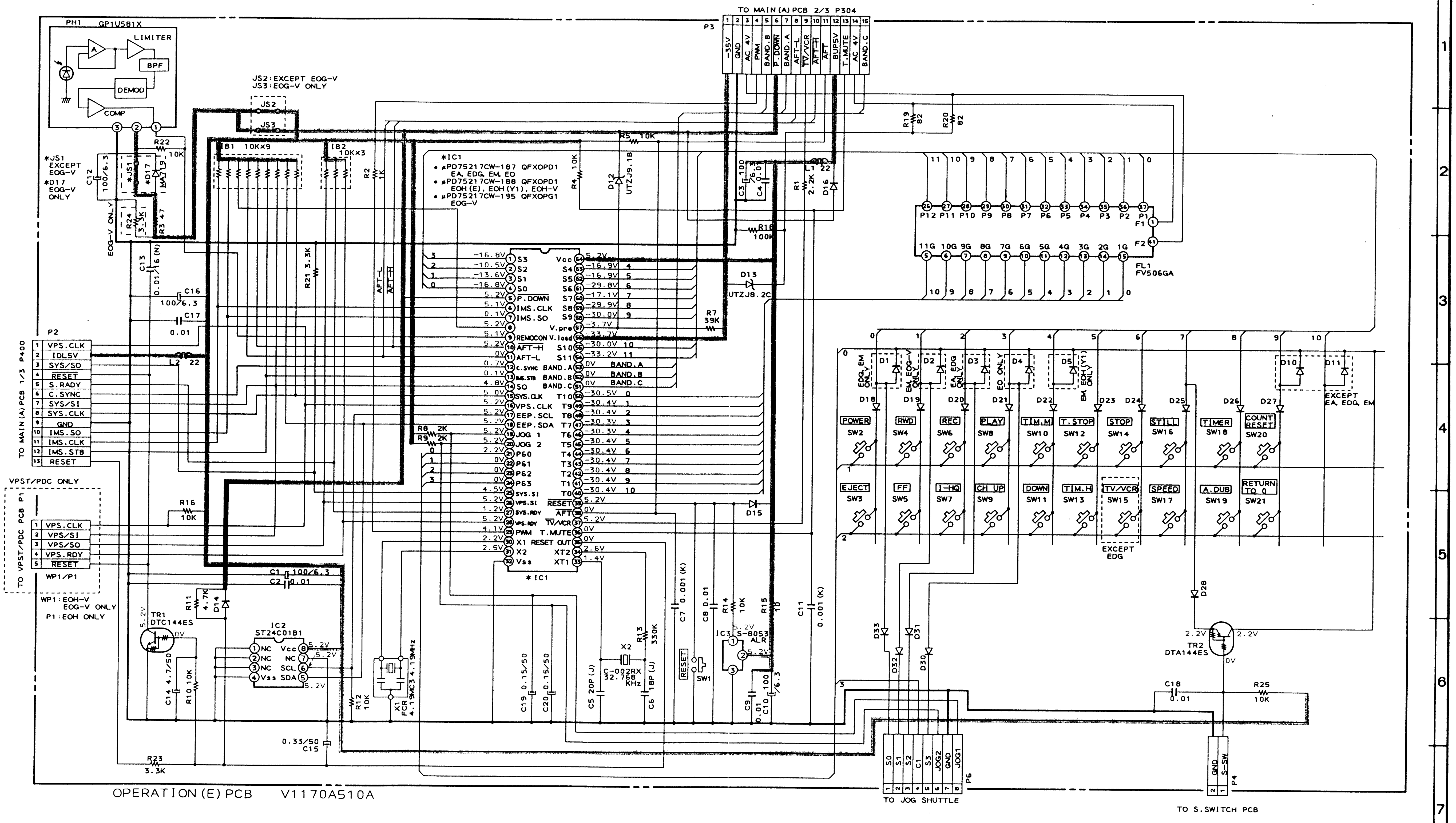
VS-G51EA/EDG/EM/EO/EOH
VS-G54EOH-V, G55EOG-V
PRE AMP
SCHEMATIC DIAGRAM

No.18-6 V117009M
A1


VR4
VR3
VR2
VR1
IC1
TR1
TR101
WP101
FL101
C102
C103
L101
JS101
JS103
P1
P2
FLOW
REC.Y
REC.C
PB.C
ENV.SW
COMP ON
TUNE
SP.CH2
SP.CH1
LP.CH2
LP.CH1
FE GND
V1166B5030
4153731
1
2
3
4
5

PRE AMP PCB V1166B5030

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER. REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.


TO MAIN (A) PCB 2/3 P304
P3
-35V
GND
AC 4V
PWM
BAND.B
P.DOWN
BAND.A
AFT-L
TV/VCR
AFT-H
AFT
BUP5V
T.MUTE
AC 4V
BAND.C
PH1 GP1U581X
LIMITER
BPF
DEMOD
COMP
JS2:EXCEPT EOG-V
JS3:EOG-V ONLY
JS2
JS3
*JS1 EXCEPT EOG-V
*D17 EOG-V ONLY
IB1 10K×9
IB2 10K×3
*IC1
• μPD75217CW-187 QFXOPD1 EA, EDG, EM, EO
• μPD75217CW-188 QFXOPD1 EOH(E), EOH(Y1), EOH-V
• μPD75217CW-195 QFXOPG1 EOG-V
P2
TO MAIN (A) PCB 1/3 P400
VPS.CLK
IDL5V
SYS/SO
RESET
S.RADY
C.SYNC
SYS/SI
SYS.CLK
GND
IMS.SO
IMS.CLK
IMS.STB
RESET
VPST/PDC ONLY
TO VPST/PDC PCB P1
VPS.CLK
VPS/SI
VPS/SO
VPS.RDY
RESET
WP1/P1
WP1:EOH-V EOG-V ONLY
P1:EOH ONLY
TR1 DTC144ES
IC2 ST24C01B1
X1 FCR 4.19MC3 4.19MHz
X2 C-002RX 32.768 KHz
IC3 S-8053 ALR
RESET SW1
FL1 FV506GA
D13 UTZJ8.2C
D12 UTZJ9.1B
POWER SW2
RWD SW4
REC SW6
PLAY SW8
TIM.M SW10
T.STOP SW12
STOP SW14
STILL SW16
TIMER SW18
COUNT RESET SW20
EJECT SW3
FF SW5
I-HQ SW7
CH UP SW9
DOWN SW11
TIM.H SW13
TV/VCR SW15
SPEED SW17
A.DUB SW19
RETURN TO 0 SW21
EXCEPT EDG
EXCEPT EA, EDG, EM
TR2 DTA144ES
P6
S0
S1
S2
C1
S3
JOG2
GND
JOG1
TO JOG SHUTTLE
P4
GND
S.SW
TO S.SWITCH PCB
OPERATION (E) PCB V1170A510A

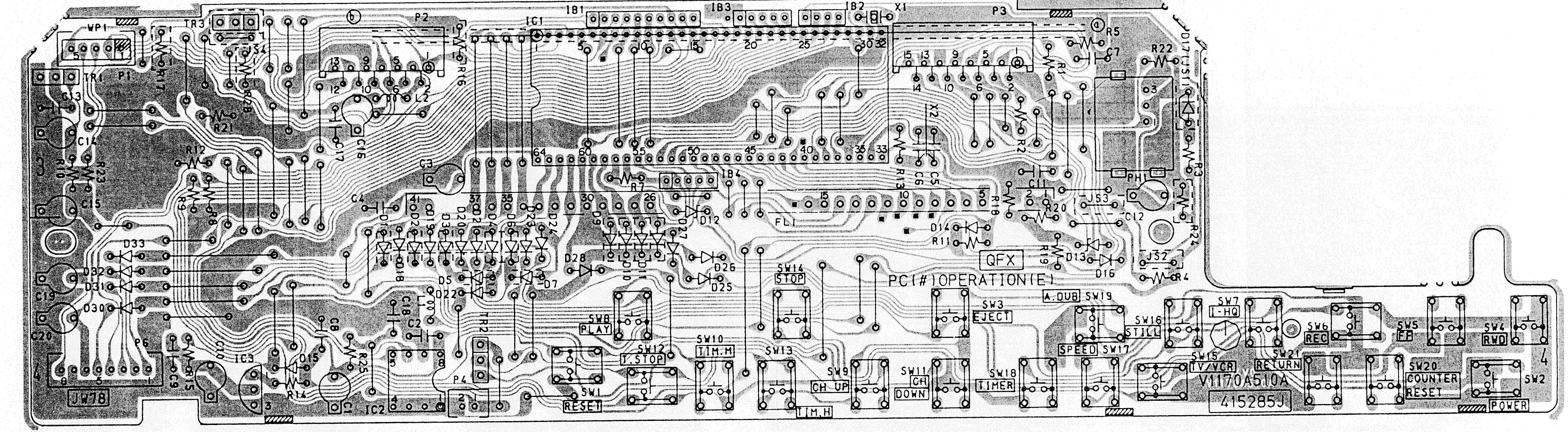
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF (P=PF) 50WV (J)
BUT 0.01μF IS 16WV (N)
ALL ELECTROLYTIC CAPACITORS IN μF/WV (M)
ALL DIODES ARE 1SS131
ALL INDUCTORS IN μH (K)

INDICATED VOLTAGES WERE
MEASURED DURING PB MODE.
(TAPE SPEED: SP)

B (POWER SUPPLY) LINE

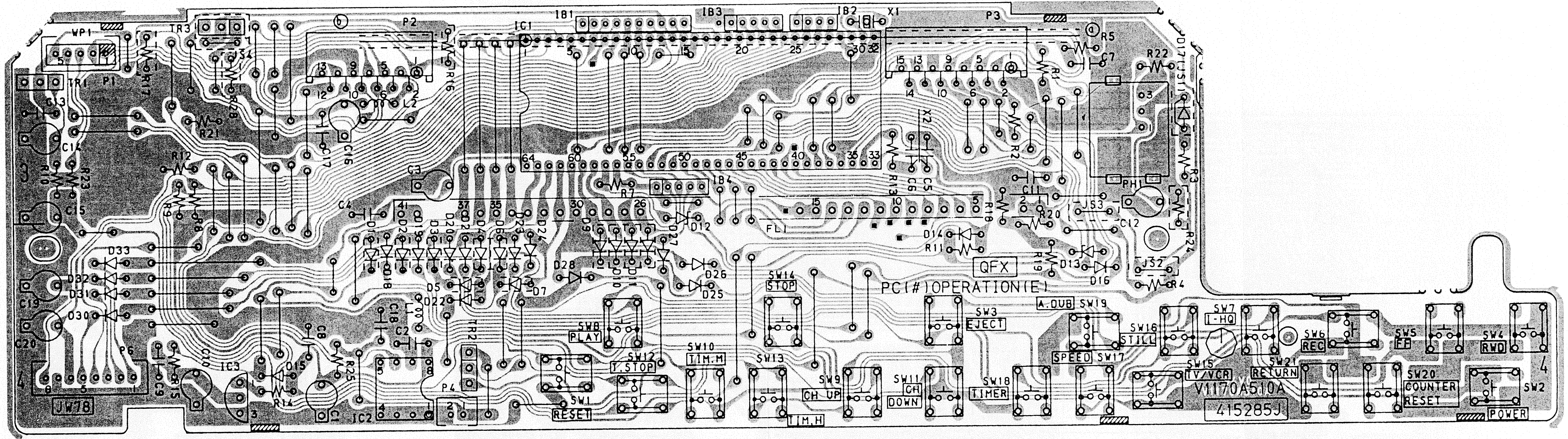
VS-G51EA/EDG/EM/EO/EOH
VS-G54EOH-V, G55EOG-V
OPERATION (E)
SCHEMATIC DIAGRAM

No.18-7 V117010M
A2


WP1
TR3
TR1
P1
P2
P3
P4
P6
IC1
IC2
IC3
IB1
IB2
IB3
IB4
X1
X2
FL1
PH1
L2
JW78
QFX
PC(#)OPERATION(E)
SW1 RESET
SW2 POWER
SW3 EJECT
SW4 RWD
SW5 FF
SW6 REC
SW7 I-HQ
SW8 PLAY
SW9 CH UP
SW10 TIM.M
SW11 CH DOWN
SW12 T.STOP
SW13 TIM.H
SW14 STOP
SW15 TV/VCR
SW16 STILL
SW17 SPEED
SW18 TIMER
SW19 A.DUB
SW20 COUNTER RESET
SW21 RETURN
V1170A510A
415285J

OPERATION(E) PCB V1170A510A

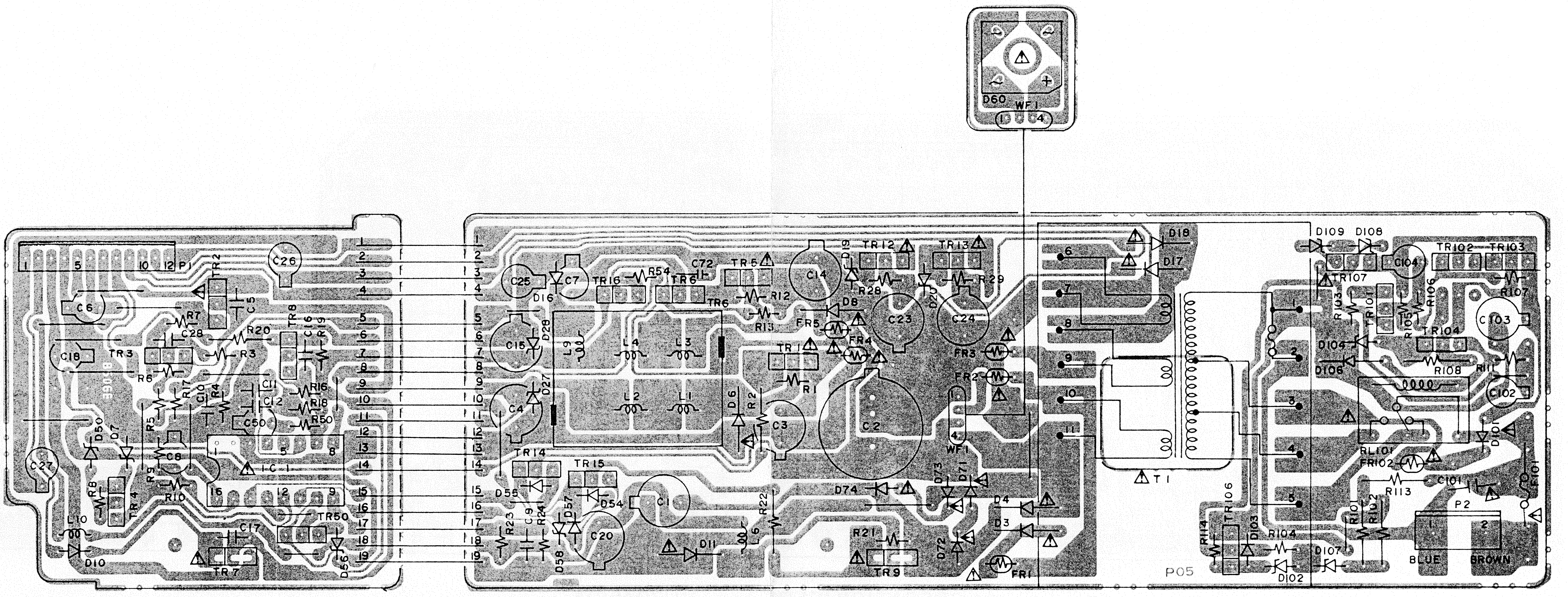
NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER.
REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT
PARTS INFORMATION.


WP1
TR1
TR3
P1
P2
P3
P4
P6
IC1
IC2
IC3
IB1
IB2
IB3
IB4
X1
X2
FL1
PH1
TR2
JW78
QFX
PC(#)OPERATION(E)
SW14 STOP
SW3 EJECT
A.DUB SW19
SW16 STILL
SPEED SW17
SW7 I-HQ
SW6 REC
SW5 FF
SW4 RWD
SW8 PLAY
SW12 T.STOP
SW10 TIM.M
SW13
SW9 CH UP
SW11 CH DOWN
SW18 TIMER
TIM.H
SW15 TV/VCR
SW21 RETURN
SW20 COUNTER RESET
SW2 POWER
SW1 RESET
V1170A510A
415285J

OPERATION(E) PCB V1170A510A

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER.
REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT
PARTS INFORMATION.

DIODE PCB
V1130B506C(J4)

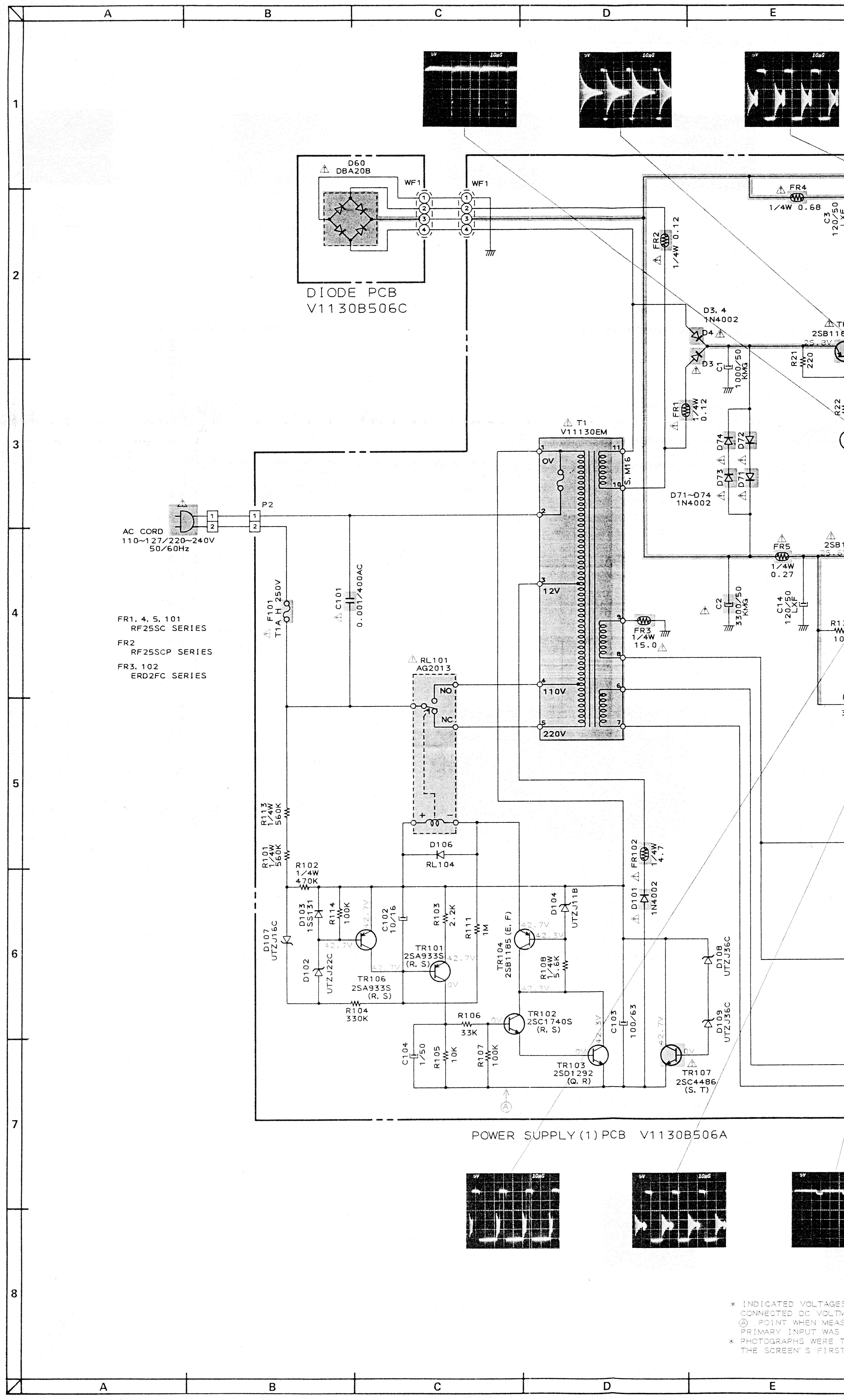

D60
WF1
P1
TR2
C26
C6
C18
TR3
R7
C28
C5
R20
TR8
C16
R19
R3
R6
C11
R16
C12
R18
R17
R4
C10
C50
R50
D50
D7
R5
C8
R9
IC1
R10
C27
R8
TR4
L10
D10
TR7
C17
TR50
D56
C25
C7
D16
TR16
R54
TR6
C72
TR5
C14
D19
TR12
TR13
D18
D17
C15
D29
L9
L4
L3
R12
R13
D8
FR5
FR4
C23
D20
R28
C24
R29
FR3
FR2
C4
D27
L2
L1
D6
R2
TR1
R1
C3
C2
WF1
TR14
TR15
D55
D57
D54
C1
C9
R23
R24
D58
C20
D11
L6
R22
D74
D73
D71
D4
D3
D72
R21
TR9
FR1
T1
P05
D109
D108
TR107
C104
TR102
TR103
R107
R103
TR101
R105
R106
C103
TR104
D104
D106
R108
R111
C102
RL101
FR102
D101
R113
C101
P2
TR106
R114
D103
R104
D107
D102
R101
R102
BLUE
BROWN

POWER SUPPLY (2) PCB
V1130B506B(J4)

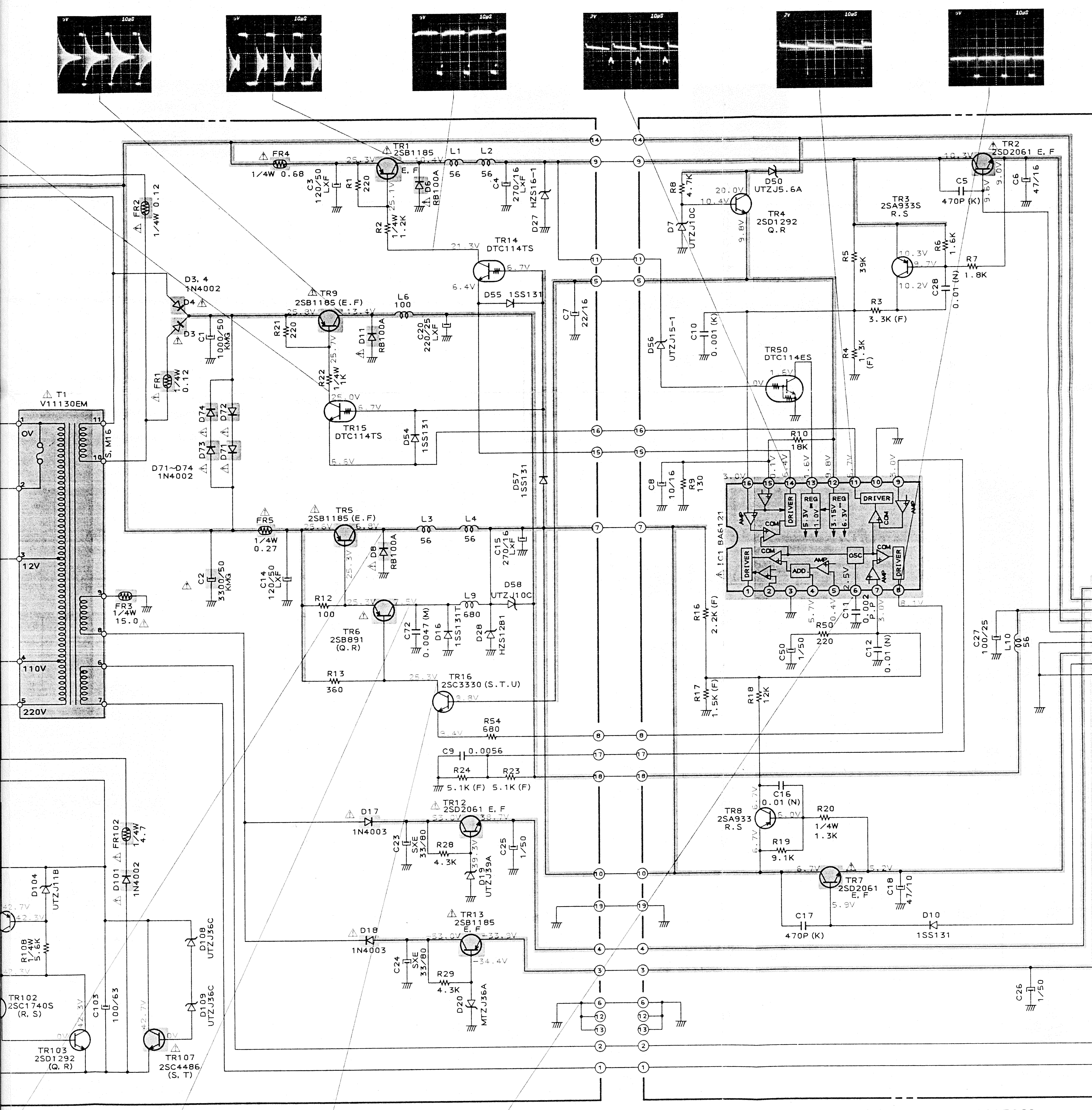
POWER SUPPLY (1) PCB V1130B506A(J4)

WARNING: ⚠ INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY.
REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S
RECOMMENDED PARTS

AVERTISSEMENT: ⚠ IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ.
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL,
NE REMPLACER QUE DES PIÈCES RECOMMANDÉES PAR LE FABRICANT

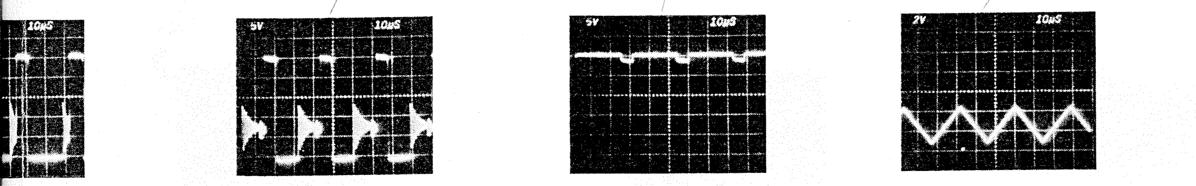

A
B
C
D
E
1
2
3
4
5
6
7
8
D60
DBA20B
WF1
DIODE PCB
V1130B506C
FR4
1/4W 0.68
C3
120/50
FR2
1/4W 0.12
D3, 4
1N4002
D4
D3
C1
1000/50
KMG
R21
220
2SB118
FR1
1/4W
0.12
R22
D74
D72
D73
D71
D71~D74
1N4002
T1
V11130EM
OV
S, M16
12V
110V
220V
FR3
1/4W
15.0
FR5
1/4W
0.27
2SB1
C2
3300/50
KMG
C14
120/50
LXF
R1
10
AC CORD
110~127/220~240V
50/60Hz
P2
F101
T1A H 250V
C101
0.001/400AC
FR1, 4, 5, 101
RF25SC SERIES
FR2
RF25SCP SERIES
FR3, 102
ERD2FC SERIES
RL101
AG2013
NO
NC
R113
1/4W
560K
R101
1/4W
560K
R102
1/4W
470K
D106
RL104
D103
1SS131
R114
100K
C102
10/16
R103
2.2K
R111
1M
FR102
1/4W
4.7
D101
1N4002
D104
UTZJ11B
D107
UTZJ16C
D102
UTZJ22C
TR106
2SA933S
(R, S)
TR101
2SA933S
(R, S)
TR104
2SB1185 (E, F)
R108
1/4W
5.6K
D108
UTZJ36C
D109
UTZJ36C
R104
330K
R106
33K
TR102
2SC1740S
(R, S)
C103
100/63
C104
1/50
R105
10K
R107
100K
TR103
2SD1292
(Q, R)
TR107
2SC4486
(S, T)
42.7V
42.3V
0V
Ⓐ
POWER SUPPLY (1) PCB V1130B506A
5V
10uS

* INDICATED VOLTAGES
CONNECTED DC VOLTM
Ⓐ POINT WHEN MEAS
PRIMARY INPUT WAS
* PHOTOGRAPHS WERE T
THE SCREEN'S FIRST


⚠ TR1
2SB1185 E.F
⚠ FR4
1/4W 0.68
C3 120/50 LXF
R1 220
L1 56
L2 56
C4 270/16 LXF
D27 HZS16-1
D6 RB100A
R2 1/4W 1.2K
⚠ FR2 1/4W 0.12
TR14
DTC114TS
D3, 4
1N4002
⚠ TR9
2SB1185 (E.F)
L6 100
C1 1000/50 KMG
R21 220
D11 RB100A
C20 220/25 LXF
D55 1SS131
⚠ FR1 1/4W 0.12
R22 1/4W 1K
TR15
DTC114TS
D54 1SS131
D57 1SS131
C7 22/16
⚠ T1
V11130EM
0V
12V
110V
220V
S. M16
D71~D74
1N4002
⚠ FR5
1/4W 0.27
⚠ TR5
2SB1185 (E.F)
L3 56
L4 56
C15 270/16 LXF
D8 RB100A
C2 3300/50 KMG
C14 120/50 LXF
FR3
1/4W 15.0
R12 100
TR6
2SB891
(Q.R)
C72 0.0047 (M)
D16 1SS131T
L9 680
D58 UTZJ10C
D28 HZS12B1
R13 360
TR16
2SC3330 (S.T.U)
R54 680
C9 0.0056
R24 5.1K (F)
R23 5.1K (F)
⚠ D17
1N4003
⚠ TR12
2SD2061 E.F
C23 SXE 33/80
R28 4.3K
D19 UTZJ39A
C25 1/50
⚠ D18
1N4003
⚠ TR13
2SB1185
E.F
C24 SXE 33/80
R29 4.3K
D20 MTZJ36A
FR102 1/4W 4.7
D101 1N4002
D104 UTZJ11B
R108 1/4W 5.6K
TR102
2SC1740S
(R, S)
C103 100/63
D108 UTZJ36C
D109 UTZJ36C
TR103
2SD1292
(Q, R)
TR107
2SC4486
(S, T)
R8 4.7K
D7 UTZJ10C
D50
UTZJ5.6A
TR4
2SD1292
Q.R
D56 UTZJ15-1
C10 0.001 (K)
TR50
DTC114ES
C8 10/16
R9 130
R10 18K
⚠ TR2
2SD2061 E.F
C5 470P (K)
C6 47/16
TR3
2SA933S
R.S
R6 1.6K
R5 39K
R7 1.8K
C28 0.01 (N)
R3 3.3K (F)
R4 1.3K (F)
⚠ IC1 BA6121
DRIVER
REG
COM
AMP
ADD
OSC
R16 2.2K (F)
C11 0.002 P.P
R50 220
C50 1/50
C12 0.01 (N)
C27 100/25
L10 56
R17 1.5K (F)
R18 12K
C16 0.01 (N)
TR8
2SA933
R.S
R20 1/4W 1.3K
R19 9.1K
TR7
2SD2061
E.F
C18 47/10
C17 470P (K)
D10 1SS131
C26 1/50
10uS

SUPPLY (1) PCB V1130B506A

POWER SUPPLY (2) PCB V1130B506B



WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

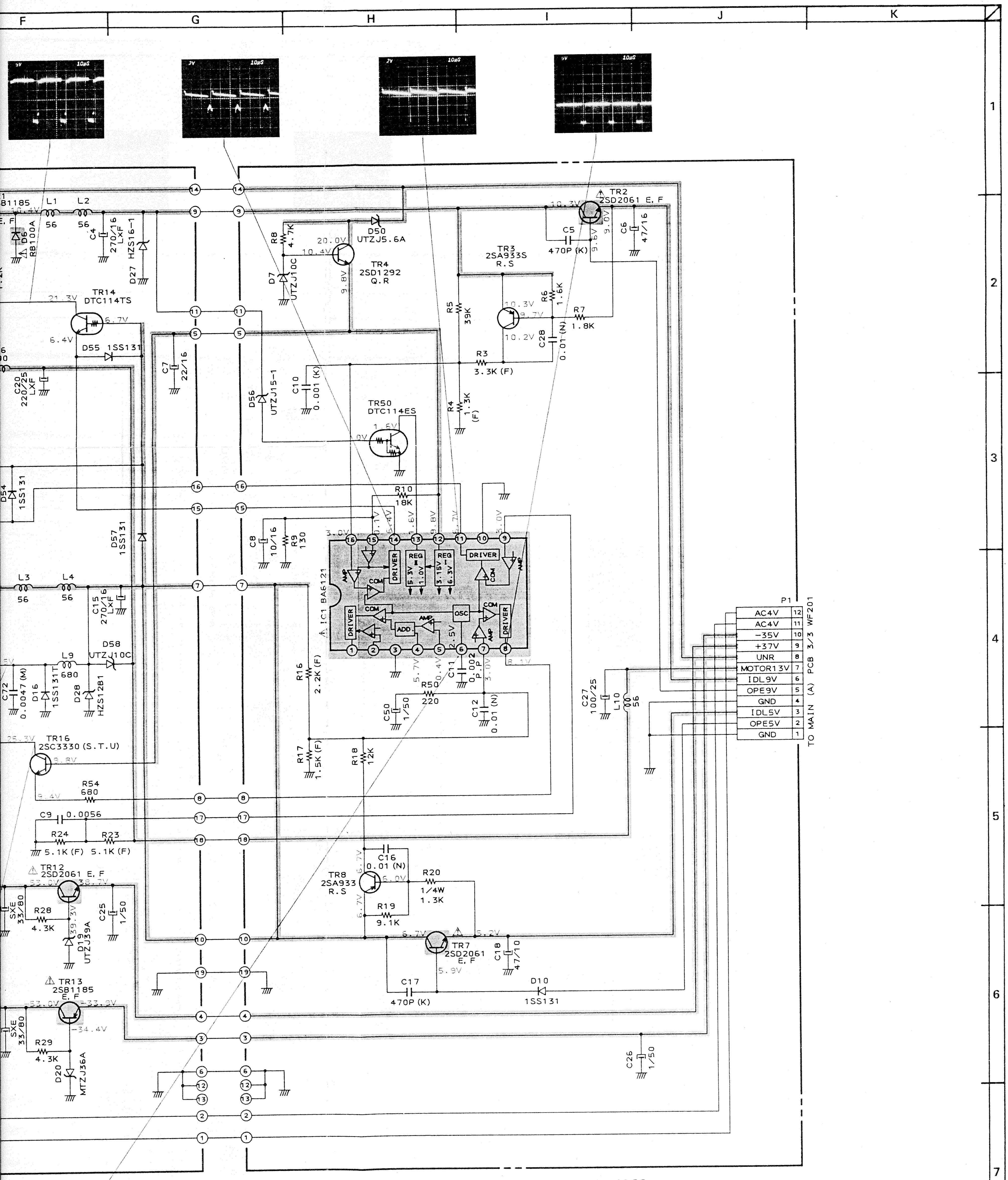
AVERTISSMENT: ⚠ ET ▨, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (
ALL CAPACITORS IN μF 50 WV (
ALL INDUCTORS IN μH (K)

▨ B (POWER SUPPLY LINE)

VS-G51EM
POWER SUPPL
SCHEMATIC D

* INDICATED VOLTAGES WERE MEASURED DURING E-E MODE. CONNECTED DC VOLTMETER'S NEGATIVE INPUT TO THE Ⓐ POINT WHEN MEASURED THE PRIMARY SECTION AND PRIMARY INPUT WAS AC 220V.
* PHOTOGRAPHS WERE TAKEN DURING E-E MODE. THE SCREEN'S FIRST LINE FROM THE BOTTOM IS DC 0V.

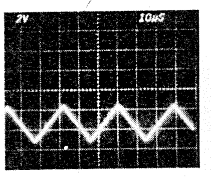

F
G
H
I
J
K
1
2
3
4
5
6
7
8
5V 10µS
2V 10µS
2V 10µS
5V 10µS
B1185
E. F
L1
56
L2
56
D6
RB100A
C4
270/16
LXF
HZS16-1
D27
TR14
DTC114TS
21.3V
6.7V
6.4V
D55 1SS131
C20
220/25
LXF
C7
22/16
R8
4.7K
D7
UTZJ10C
20.0V
10.4V
9.8V
D50
UTZJ5.6A
TR4
2SD1292
Q.R
D56
UTZJ15-1
C10
0.001 (K)
TR50
DTC114ES
1.6V
0V
TR2
2SD2061 E. F
10.3V
9.6V
9.0V
C5
470P (K)
C6
47/16
TR3
2SA933S
R.S
R5
39K
R6
1.6K
10.3V
9.7V
10.2V
C28
0.01 (N)
R7
1.8K
R3
3.3K (F)
R4
1.3K
(F)
D54
1SS131
D57
1SS131
C8
10/16
R9
130
R10
18K
IC1 BA6121
AMP
COM
DRIVER
REG
5.3V
1.0V
3.15V
6.3V
OSC
ADD
L3
56
L4
56
C15
270/16
LXF
D58
UTZJ10C
L9
680
C72
0.0047 (M)
D16
1SS131T
D28
HZS12B1
R16
2.2K (F)
R50
220
C50
1/50
C11
0.002
P.P
C12
0.01 (N)
C27
100/25
L10
56
P1
AC4V
AC4V
-35V
+37V
UNR
MOTOR13V
IDL9V
OPE9V
GND
IDL5V
OPE5V
GND
12
11
10
9
8
7
6
5
4
3
2
1
TO MAIN (A) PCB 3/3 WF201
TR16
2SC3330 (S.T.U)
25.3V
R54
680
C9
0.0056
R24
5.1K (F)
R23
5.1K (F)
R17
1.5K (F)
R18
12K
TR12
2SD2061 E. F
SXE
33/80
R28
4.3K
C25
1/50
D19
UTZJ39A
TR8
2SA933
R.S
C16
0.01 (N)
R20
1/4W
1.3K
R19
9.1K
TR7
2SD2061
E. F
C18
47/10
C17
470P (K)
D10
1SS131
TR13
2SB1185
E. F
-34.4V
SXE
33/80
R29
4.3K
D20
MTZJ36A
C26
1/50

POWER SUPPLY (2) PCB V1130B506B

WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ▨, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN µF 50 WV (M)
ALL INDUCTORS IN µH (K)

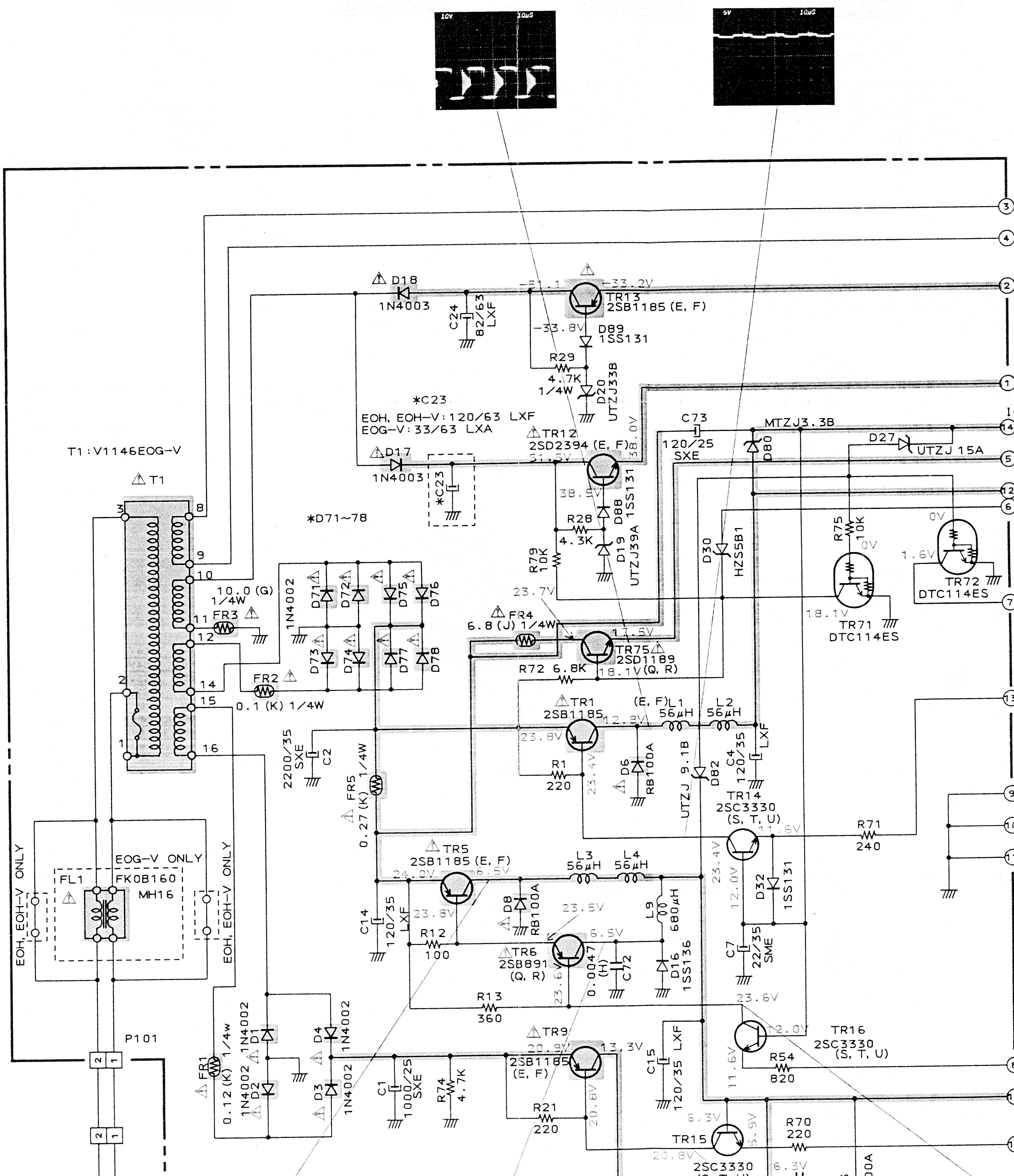


▨ B (POWER SUPPLY LINE)

RED DURING E-E MODE.
TIVE INPUT TO THE
MARY SECTION AND

E-E MODE.
THE BOTTOM IS DC 0V.

VS-G51EM
POWER SUPPLY (1), (2) & DIODE
SCHEMATIC DIAGRAM
No.18-8 V116403M
A1


T1:V1146EOG-V
T1
D18 1N4003
C24 82/63 LXF
TR13 2SB1185 (E, F)
-33.2V
-33.8V
D89 1SS131
R29 4.7K 1/4W
D20 UTZJ33B
*C23
EOH, EOH-V:120/63 LXF
EOG-V:33/63 LXA
D17 1N4003
TR12 2SD2394 (E, F)
38.0V
38.5V
D88 1SS131
R28 4.3K
R79 10K
D19 UTZJ39A
C73 120/25 SXE
MTZJ3.3B
D80
D27 UTZJ 15A
*D71~78
D71 D72 D73 D74 D75 D76 D77 D78
1N4002
10.0 (G) 1/4W
FR3
FR4 6.8 (J) 1/4W
FR2 0.1 (K) 1/4W
23.7V
17.5V
TR75 2SD1189 (Q, R)
R72 6.8K
18.1V
D30 HZS5B1
R75 10K
0V
1.6V
TR72 DTC114ES
18.1V
TR71 DTC114ES
TR1 2SB1185
(E, F) L1 56μH
L2 56μH
12.8V
23.8V
C4 120/35 LXF
R1 220
23.4V
D6 RB100A
UTZJ 9.1B
D82
TR14 2SC3330 (S, T, U)
11.6V
R71 240
2200/35 SXE C2
FR5 0.27 (K) 1/4W
TR5 2SB1185 (E, F)
24.0V
6.5V
L3 56μH
L4 56μH
D8 RB100A
23.5V
23.4V
12.0V
D32 1SS131
23.8V
C14 120/35 LXF
R12 100
TR6 2SB891 (Q, R)
6.5V
0.0047 (H)
C72
L9 680μH
D16 1SS136
C7 22/35 SME
23.6V
R13 360
23.6V
EOH, EOH-V ONLY
EOG-V ONLY
FL1 FK08160 MH16
P101
D1 D2 D3 D4 1N4002
FR1 0.12 (K) 1/4W
TR9 2SB1185 (E, F)
20.9V
13.3V
C1 1000/25 SXE
R74 4.7K
C15 120/35 LXF
12.0V
TR16 2SC3330 (S, T, U)
11.6V
R54 820
R21 220
20.6V
6.3V
TR15
5.9V
R70 220
20.8V
2SC3330 (S, T, U)
6.3V
D83 RB100A
C17 470P
TR7 2SD2012
6.0V
5.3V
L6 100μH
D11 RB100A
C20 220/25 LXF
R78 0.22/1W
FR1, 4, 5 RF25SC SERIES
FR2 RF25CP SERIES
FR3 ERD2FC SERIES
AC220~230V 50Hz
10V 10μS
5V 10μS

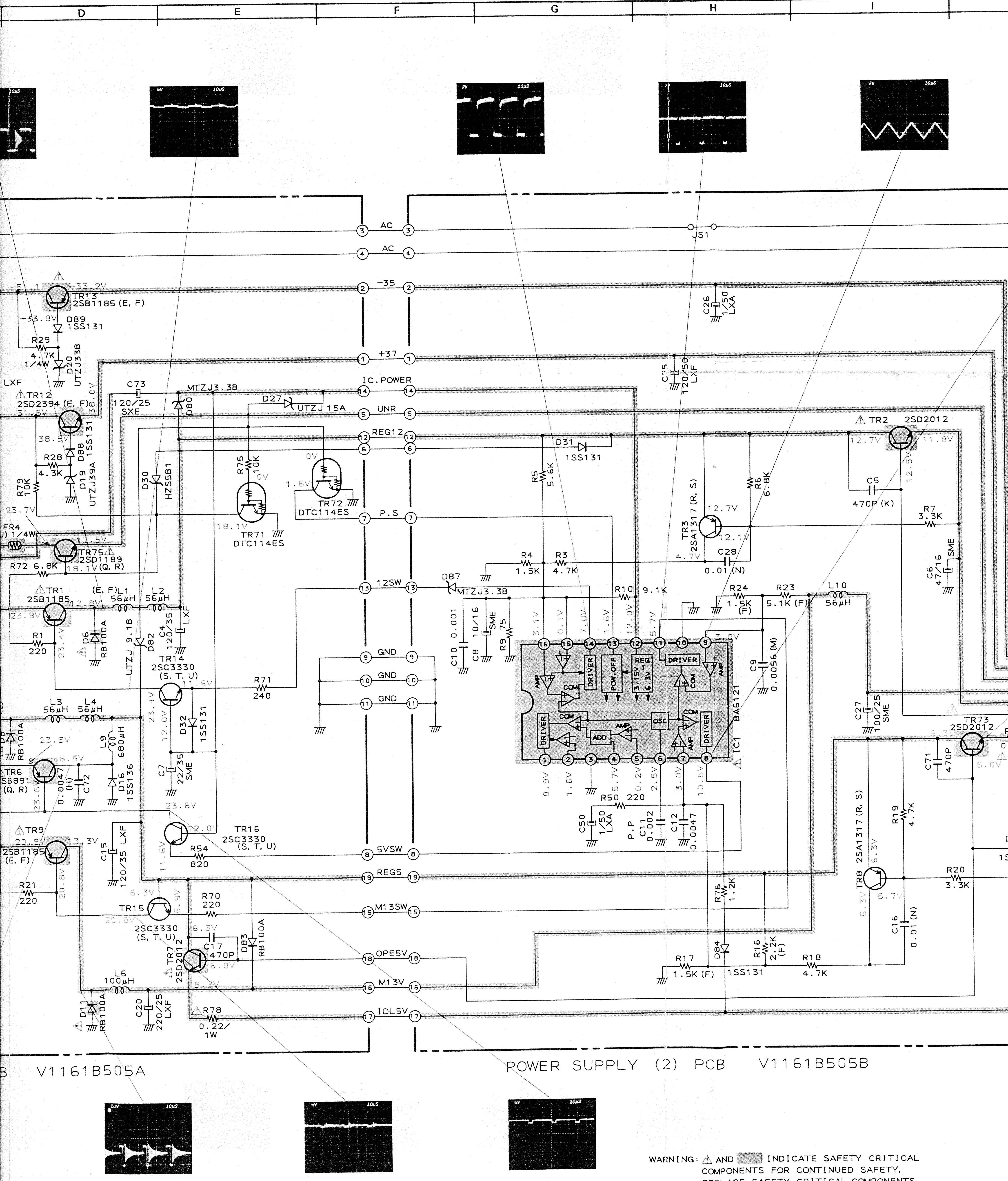
POWER SUPPLY (1) PCB V1161B505A

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF 50 WV (M)

▨ : B (POWER SUPPLY) LINE

* INDICAT
EE MODE

* PHOTOGR
THE SCR
IS DC C


D
E
F
G
H
I
10uS
5V 10uS
2V 10uS
2V 10uS
2V 10uS
AC
AC
JS1
-35
C26 1/50 LXA
+37
C25 120/50 LXF
IC.POWER
UNR
REG12
P.S
12SW
GND
GND
GND
5VSW
REG5
M13SW
OPE5V
M13V
IDL5V
TR13 2SB1185(E, F)
-33.2V
-33.8V
D89 1SS131
R29 4.7K 1/4W
D20 UTZJ33B
LXF
TR12 2SD2394(E, F)
38.0V
38.5V
R28 4.3K
D88 1SS131
D19 UTZJ39A
R79 10K
23.7V
FR4 1/4W
TR75 2SD1189 (Q, R)
18.1V
R72 6.8K
C73 120/25 SXE
MTZJ3.3B
D80
D27 UTZJ 15A
D30 HZS5B1
R75 10K
0V
TR71 DTC114ES
18.1V
TR72 DTC114ES
1.6V
TR1 2SB1185 (E, F)
12.8V
23.8V
23.4V
L1 56µH
L2 56µH
C4 120/35 LXF
D6 RB100A
R1 220
D82 UTZJ 9.1B
TR14 2SC3330 (S, T, U)
11.6V
R71 240
23.4V
12.0V
D32 1SS131
C7 22/35 SME
L3 56µH
L4 56µH
L9 680µH
RB100A
23.5V
TR6 2SB891 (Q, R)
6.5V
0.0047 (H)
C72
D16 1SS136
23.6V
TR9 2SB1185 (E, F)
13.3V
R21 220
20.6V
C15 120/35 LXF
23.6V
TR16 2SC3330 (S, T, U)
12.0V
R54 820
11.6V
TR15 2SC3330 (S, T, U)
6.3V
20.8V
5.9V
R70 220
6.3V
C17 470P
D83 RB100A
TR7 2SD2012
6.0V
5.2V
L6 100µH
D11 RB100A
C20 220/25 LXF
R78 0.22/ 1W
R5 5.6K
D31 1SS131
TR3 2SA1317 (R, S)
12.7V
12.1V
R6 6.8K
R4 1.5K
R3 4.7K
4.7V
C28 0.01 (N)
D87 MTZJ3.3B
R10 9.1K
C10 0.001
C8 10/16 SME
R9 75
3.1V
0.1V
7.8V
1.6V
12.0V
5.7V
3.0V
R24 1.5K (F)
R23 5.1K (F)
L10 56µH
C9 0.0056 (M)
AMP
COM
DRIVER
POW.OFF
REG 3.15V 6.3V
DRIVER
COM
AMP
DRIVER
COM
ADD
AMP
OSC
COM
DRIVER
AMP
BA6121
IC1
0.9V
1.6V
5.7V
0.2V
2.5V
3.0V
10.5V
R50 220
C50 1/50 LXA
P.P C11 0.002
C12 0.0047
TR2 2SD2012
12.7V
11.8V
12.5V
C5 470P (K)
R7 3.3K
C6 47/16 SME
C27 100/25 SME
TR73 2SD2012
C71 470P
6.0V
TR8 2SA1317 (R, S)
6.3V
5.7V
R19 4.7K
R20 3.3K
C16 0.01 (N)
R76 1.2K
D84 1SS131
R16 2.2K (F)
R17 1.5K (F)
R18 4.7K
V1161B505A
POWER SUPPLY (2) PCB V1161B505B
10V 10uS
5V 10uS
5V 10uS

WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ▨, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

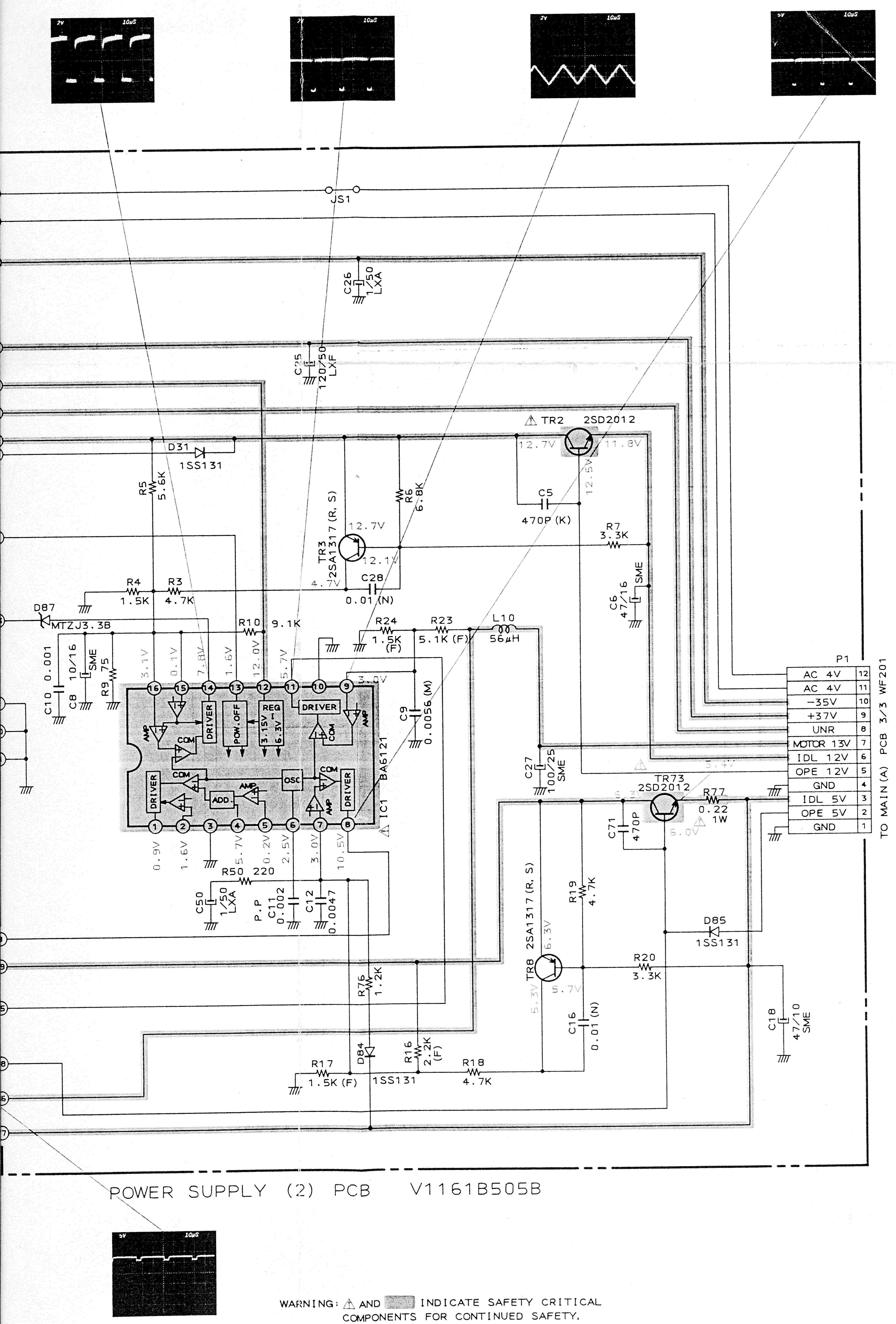
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN µF 50 WV (M)

▨ : B (POWER SUPPLY) LINE

* INDICATED VOLTAGE WERE MEASURED DURING EE MODE.

* PHOTOGRAPHS WERE TAKEN DURING E-E MODE. THE SCREEN'S FIRST LINE FROM THE BOTTOM IS DC 0V.

D E F G H I


2V 10uS
5V 10uS
JS1
C26 1/50 LXA
C25 120/50 LXF
TR2 2SD2012
12.7V
11.8V
12.5V
C5 470P (K)
R7 3.3K
D31 1SS131
R5 5.6K
R6 6.8K
TR3 2SA1317 (R, S)
12.7V
12.1V
4.7V
C28 0.01 (N)
R4 1.5K
R3 4.7K
C6 47/16 SME
D87 MTZJ3.3B
R10 9.1K
R24 1.5K (F)
R23 5.1K (F)
L10 56µH
C10 0.001
C8 10/16 SME
R9 75
3.1V
0.1V
7.8V
1.6V
12.0V
5.7V
3.0V
DRIVER
AMP
COM
POW.OFF
REG 3.15V 6.3V
OSC
ADD
C9 0.0056 (M)
BA6121 IC1
C27 100/25 SME
TR73 2SD2012
5.3V
5.4V
6.0V
C71 470P
R77 0.22 1W
P1
AC 4V 12
AC 4V 11
-35V 10
+37V 9
UNR 8
MOTOR 13V 7
IDL 12V 6
OPE 12V 5
GND 4
IDL 5V 3
OPE 5V 2
GND 1
TO MAIN (A) PCB 3/3 WF201
0.9V
1.6V
5.7V
0.2V
2.5V
3.0V
10.5V
R50 220
C50 1/50 LXA
P.P C11 0.002
C12 0.0047
TR8 2SA1317 (R, S)
6.3V
5.3V
5.7V
R19 4.7K
D85 1SS131
R20 3.3K
C16 0.01 (N)
C18 47/10 SME
R76 1.2K
D84 1SS131
R16 2.2K (F)
R17 1.5K (F)
R18 4.7K
POWER SUPPLY (2) PCB V1161B505B

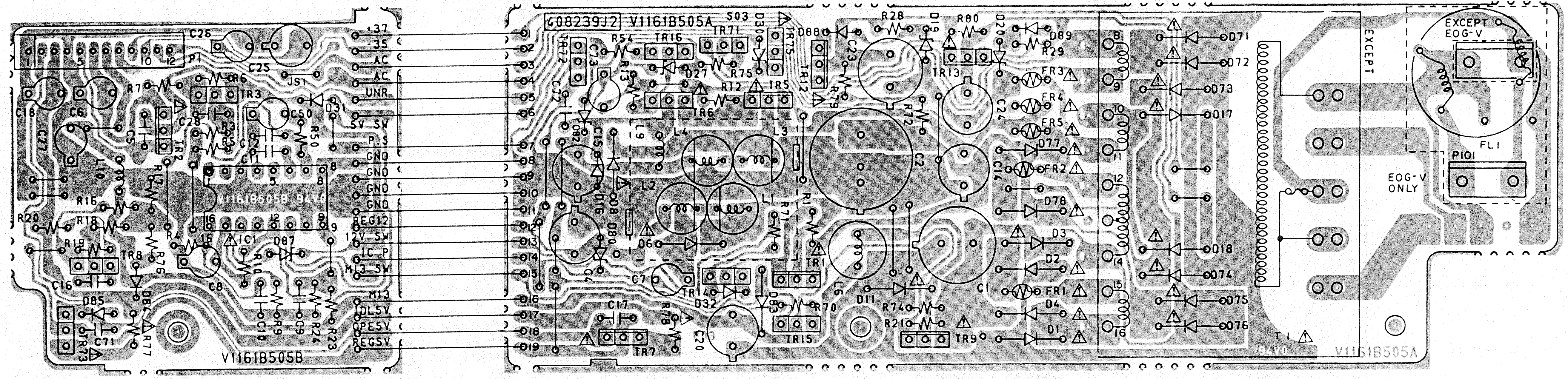
AGE WERE MEASURED DURING

RE TAKEN DURING E-E MODE.
IRST LINE FROM THE BOTTOM

WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ▨, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

VS-G51EOH
VS-G54EOH-V, G55EOG-V
POWER SUPPLY (1), (2)
SCHEMATIC DIAGRAM
No.18-9 V117003M
A2


+37
-35
AC
AC
UNR
SV SW
P.S
GND
GND
GND
GND
REG12
12V SW
LC P
M13 SW
M13
DLSV
OPESV
REGSV
V1161B505B 94V0
V1161B505B
IC1
TR2
TR3
TR8
TR73
JS1
F1
L10
408239J2
V1161B505A
S03
TR71
TR16
TR72
TR75
TR5
TR6
TR12
TR13
TR14
TR15
TR1
TR7
TR9
L1
L2
L3
L4
L6
L9
C1
C2
FR1
FR2
FR3
FR4
FR5
D1
D2
D3
D4
D11
D32
D71
D72
D73
D74
D75
D76
D77
D78
D88
D89
D17
D18
T1
EXCEPT
EXCEPT EOG-V
EOG-V ONLY
FL1
P101
V1161B505A

POWER SUPPLY(2)PCB V1161B505B(J3)

POWER SUPPLY(1)PCB V1161B505A(J3)

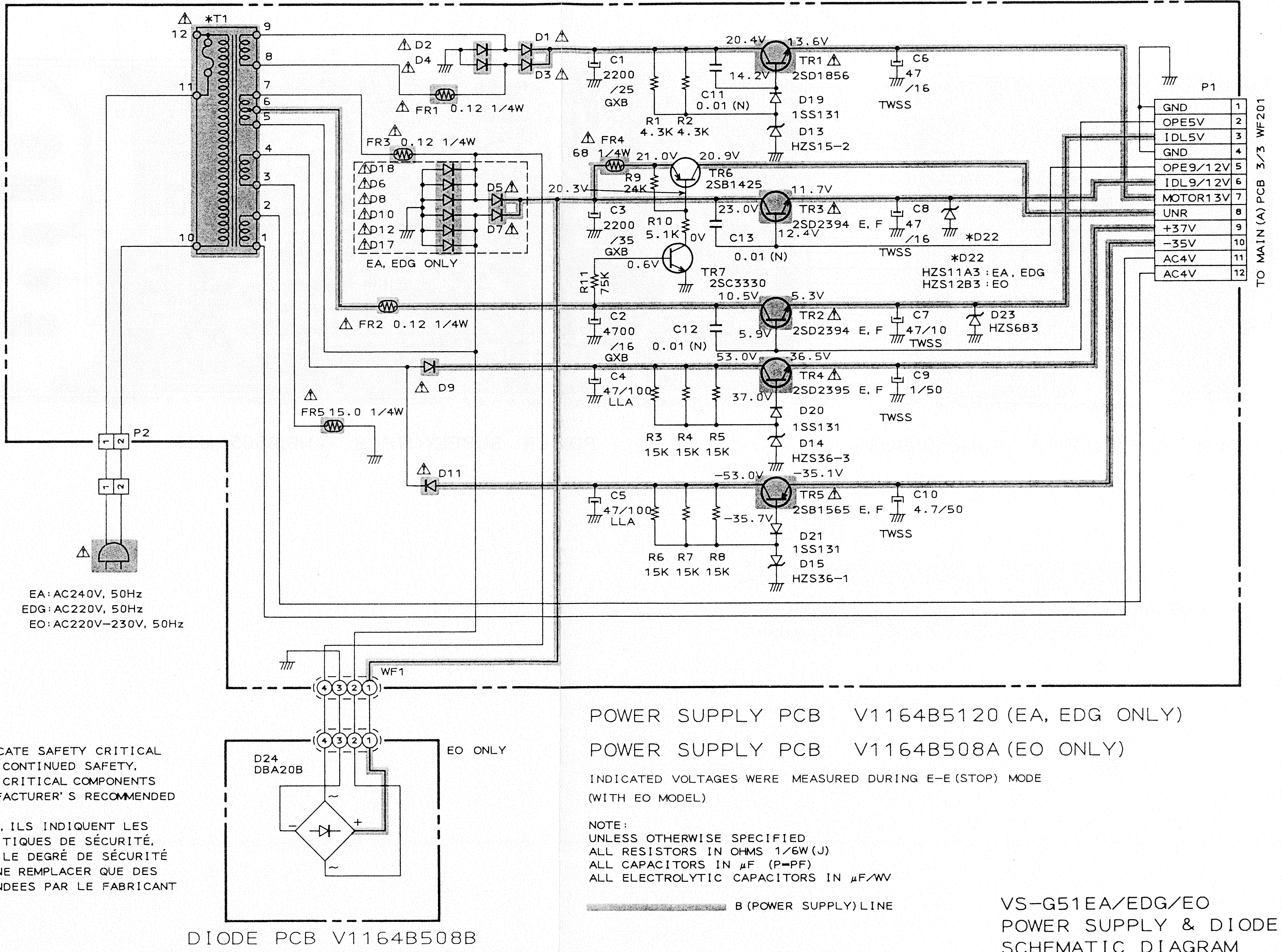
WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

*T1
V1130EO: EO
V1164EA: EA
V1130EDG: EDG

D1~D8, D10, D12, 17, 18
1N4002
D9, D11
1N4003

FR2
RF25SC SERIES
FR1, 3
RF25SCP SERIES
FR5
ERD2FC SERIES
FR4
ERD2FC SERIES


⚠ *T1
12
9
8
7
11
6
5
4
3
2
10
1
⚠ D2
⚠ D4
D1 ⚠
D3 ⚠
⚠ FR1 0.12 1/4W
⚠ FR3 0.12 1/4W
⚠D18
⚠D6
⚠D8
⚠D10
⚠D12
⚠D17
D5⚠
D7⚠
EA, EDG ONLY
⚠ FR2 0.12 1/4W
⚠ D9
⚠ FR5 15.0 1/4W
⚠ D11
P2
1 2
1 2
⚠
EA: AC240V, 50Hz
EDG: AC220V, 50Hz
EO: AC220V–230V, 50Hz
C1 2200 /25 GXB
R1 4.3K
R2 4.3K
C11 0.01 (N)
20.4V
13.6V
14.2V
TR1 ⚠ 2SD1856
D19 1SS131
D13 HZS15–2
C6 47 /16 TWSS
⚠ FR4 68 1/4W
21.0V
20.9V
R9 24K
TR6 2SB1425
20.3V
C3 2200 /35 GXB
R10 5.1K
0V
23.0V
11.7V
TR3 ⚠ 2SD2394 E, F
12.4V
C13 0.01 (N)
C8 47 /16 TWSS
*D22
*D22
HZS11A3 : EA, EDG
HZS12B3 : EO
0.6V
TR7 2SC3330
R11 75K
C2 4700 /16 GXB
C12 0.01 (N)
10.5V
5.3V
5.9V
TR2 ⚠ 2SD2394 E, F
C7 47/10 TWSS
D23 HZS6B3
C4 47/100 LLA
53.0V
36.5V
37.0V
TR4 ⚠ 2SD2395 E, F
C9 1/50 TWSS
D20 1SS131
D14 HZS36–3
R3 15K
R4 15K
R5 15K
C5 47/100 LLA
–53.0V
–35.1V
–35.7V
TR5 ⚠ 2SB1565 E, F
C10 4.7/50 TWSS
D21 1SS131
D15 HZS36–1
R6 15K
R7 15K
R8 15K
P1
GND 1
OPE5V 2
IDL5V 3
GND 4
OPE9/12V 5
IDL9/12V 6
MOTOR13V 7
UNR 8
+37V 9
–35V 10
AC4V 11
AC4V 12
TO MAIN (A) PCB 3/3 WF201
WF1
4 3 2 1
4 3 2 1
EO ONLY
D24 DBA20B
~
–
+
~
DIODE PCB V1164B508B

WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY, REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ▨, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ, POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

POWER SUPPLY PCB V1164B5120 (EA, EDG ONLY)
POWER SUPPLY PCB V1164B508A (EO ONLY)

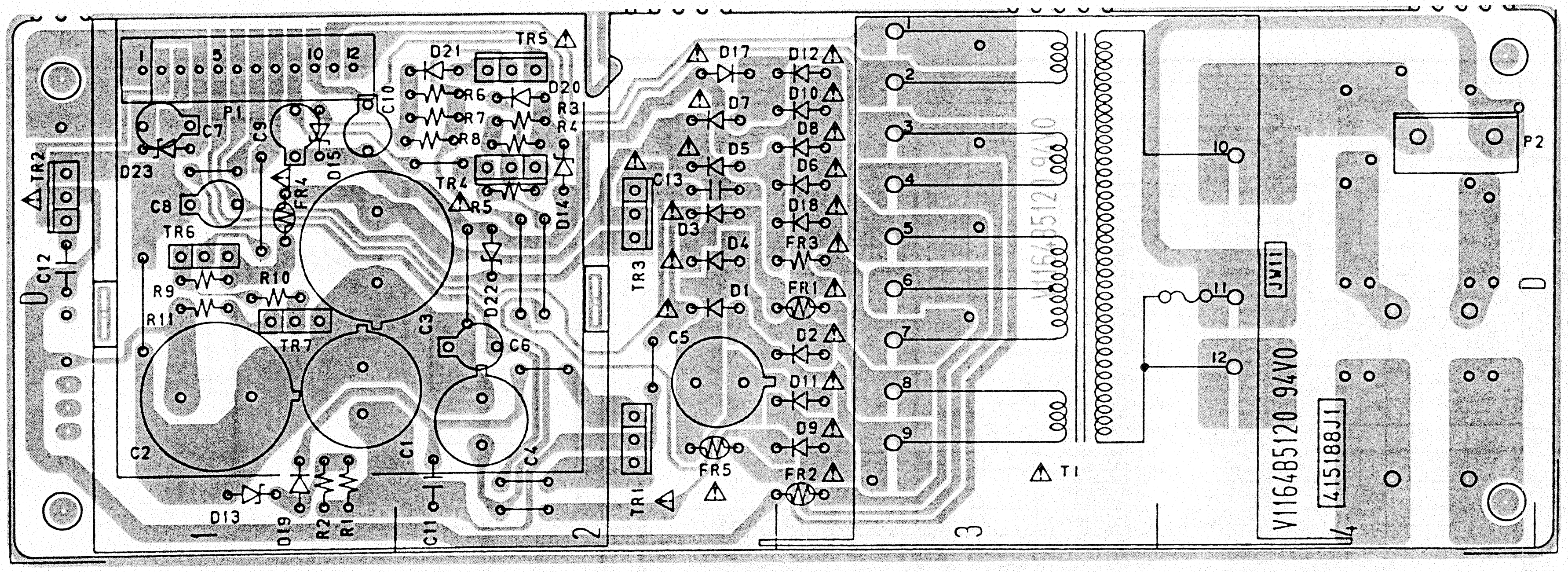
INDICATED VOLTAGES WERE MEASURED DURING E-E (STOP) MODE
(WITH EO MODEL)

NOTE:
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF (P=PF)
ALL ELECTROLYTIC CAPACITORS IN μF/WV

▨ B (POWER SUPPLY) LINE

VS–G51EA/EDG/EO
POWER SUPPLY & DIODE SCHEMATIC DIAGRAM

No. 18–10 V117002M
A2

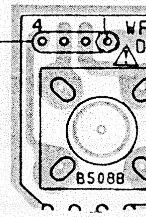

TR5
D21
D20
R3
R4
R6
R7
R8
C10
P1
C7
C9
D23
C8
FR4
D15
TR4
R5
D14
TR2
TR6
R9
R10
R11
C12
TR7
C3
D22
C6
C2
C1
C4
D13
D19
R2
R1
C11
TR3
TR1
D17
D12
D7
D10
D5
D8
C13
D6
D18
D3
D4
FR3
D1
FR1
C5
D2
D11
D9
FR5
FR2
T1
P2
JW11
V1164B5120 94V0
4151188J1

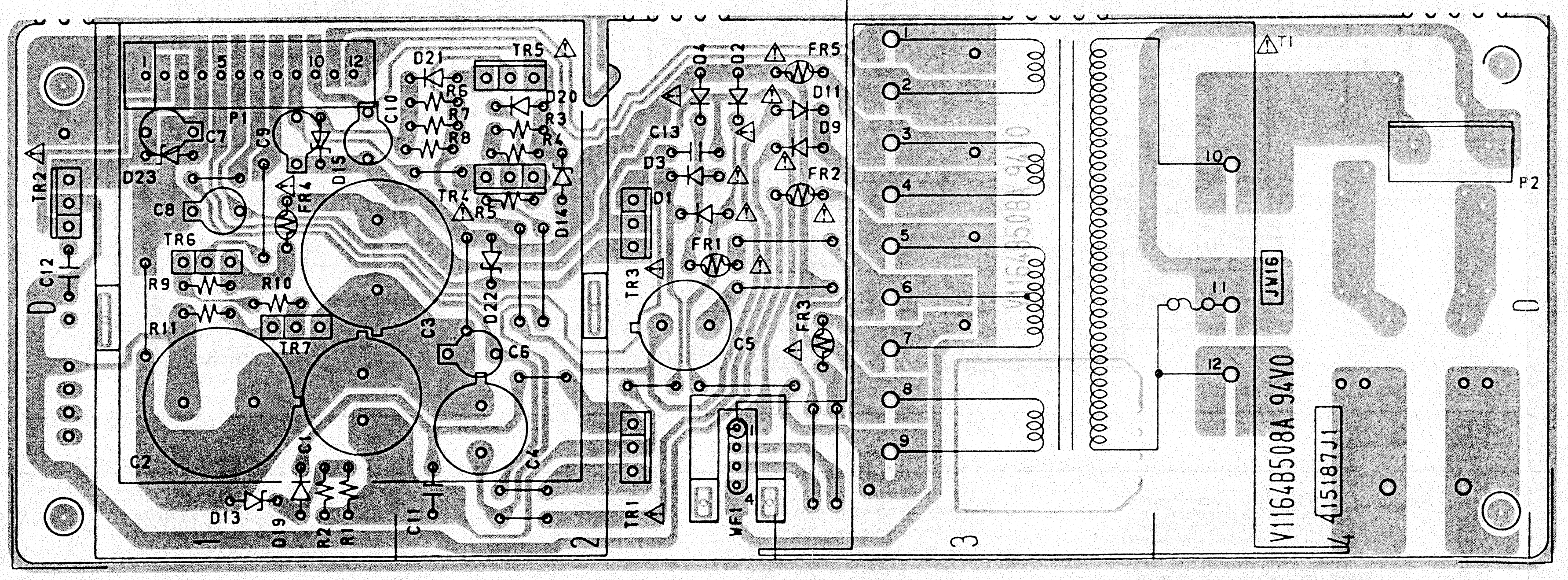
POWER SUPPLY PCB V1164B5120(J1) (EA.EDG ONLY)

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY.
REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S
RECOMMENDED PARTS

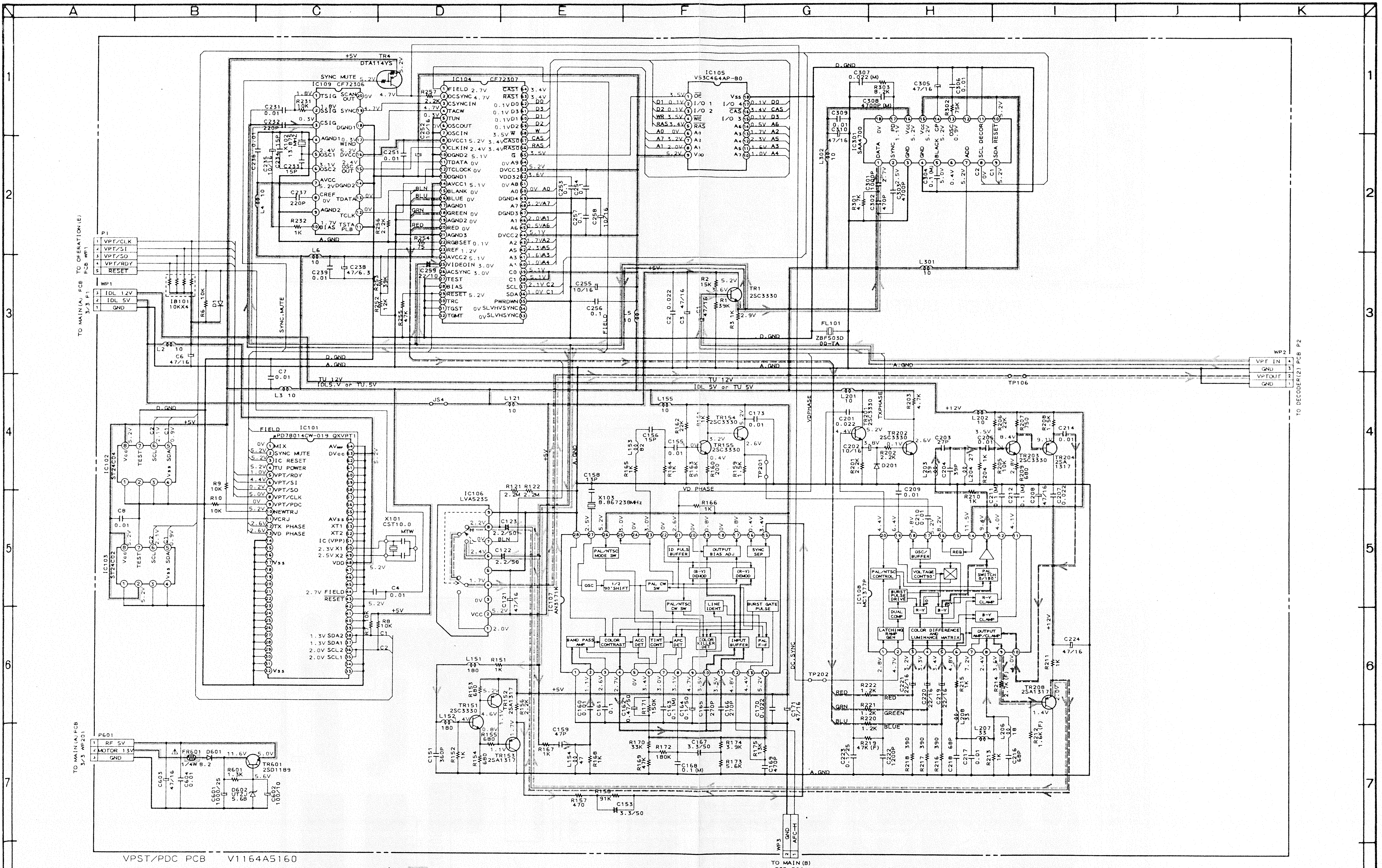
AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ.
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL,
NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

DIODE PCB
V1164B508B(J1)


WF1A
D24
V1164
B508B


TR5
D21
D20
R3
R4
R6
R7
R8
C10
P1
C7
C9
D23
C8
FR4
D15
TR4
R5
D14
TR2
TR6
R9
R10
R11
C12
TR7
C3
D22
C6
C2
C1
C4
D13
D19
R2
R1
C11
TR3
TR1
D4
D2
FR5
D11
D9
C13
D3
FR2
D1
FR1
C5
FR3
WF1
T1
P2
JW16
V1164B508A 94V0
4151187J1

POWER SUPPLY PCB V1164B508A(J1) (EO ONLY)


IC109 CF72306
TR4 DTA114YS
IC104 CF72307
IC105 V53C464AP-80
IC301 SAA4700
IC102 ST24C04
IC103 ST24C02
IC101 μPD78014CW-019 QXVPT1
X101 CST10.0 MTW
IC106 LVA523S
X103 8.867238MHz
IC107 AN3171K
IC108 MC3177P
TR1 2SC3330
FL101 ZBF503D 00-TA
TR154 2SC3330
TR155 2SC3330
TR151 2SC3330
TR152 2SA1317
TR153 2SA1317
TR201 2SC3330
TR202 2SC3330
TR203 2SC3330
TR204 2SA1317
TR208 2SA1317
TR601 2SD1189
P1
VPT/CLK
VPT/SI
VPT/SO
VPT/RDY
RESET
WP1
IDL 12V
IDL 5V
GND
TO MAIN(A) PCB 3/3 P1
TO OPERATION(E) PCB WP1
WP2
VPT IN
GND
VPTOUT
GND
TO DECODER(2) PCB P2
P601
RF 5V
MOTOR 15V
GND
TO MAIN(A) PCB 3/3 WP201
WP3
GND
AFC-H
TO MAIN(B) PCB P601
TU 12V
IDL5.V or TU.5V
D.GND
A.GND
+5V
+12V
VD PHASE
VDPHASE
TXPHASE
SYNC MUTE
FIELD
DC.SYNC
TP106
TP201
TP202
RED
GRN
BLU
GREEN
BLUE
BAND PASS AMP
COLOR CONTRAST
ACC DET
TINT CONT
APC DET
COLOR KILLER DET
INPUT BUFFER
PAL F-F
PAL/NTSC MODE SW
ID PULS BUFFER
OUTPUT BIAS ADJ
SYNC SEP
(B-Y) DEMOD
(R-Y) DEMOD
OSC
1/2 90°SHIFT
PAL CW SW
PAL/NTSC CW SW
LINE IDENT
BURST GATE PULSE
PAL/NTSC CONTROL
OSC/BUFFER
VOLTAGE CONTROL
PAL SWITCH 0/180
REG
BURST PULSE DRIVE
DUAL COMP
R-Y
B-Y
R-Y CLAMP
B-Y CLAMP
LATCHING RAMP GEN
COLOR DIFFERENCE AND LUMINANCE MATRIX
OUTPUT AMP/CLAMP

VPST/PDC PCB V1164A5160

WARNING: ⚠ AND ▨ INDICATE SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSMENT: ⚠ ET ▨, ILS INDIQUENT LES COMPOSTANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

▨ : B (POWER SUPPLY) LINE
━ : Y IN (TUNER) SIGNAL
╍ : Y VPT SIGNAL
━ : CHROMA IN (TUNER) SIGNAL
╍ : CHROMA VPT SIGNAL

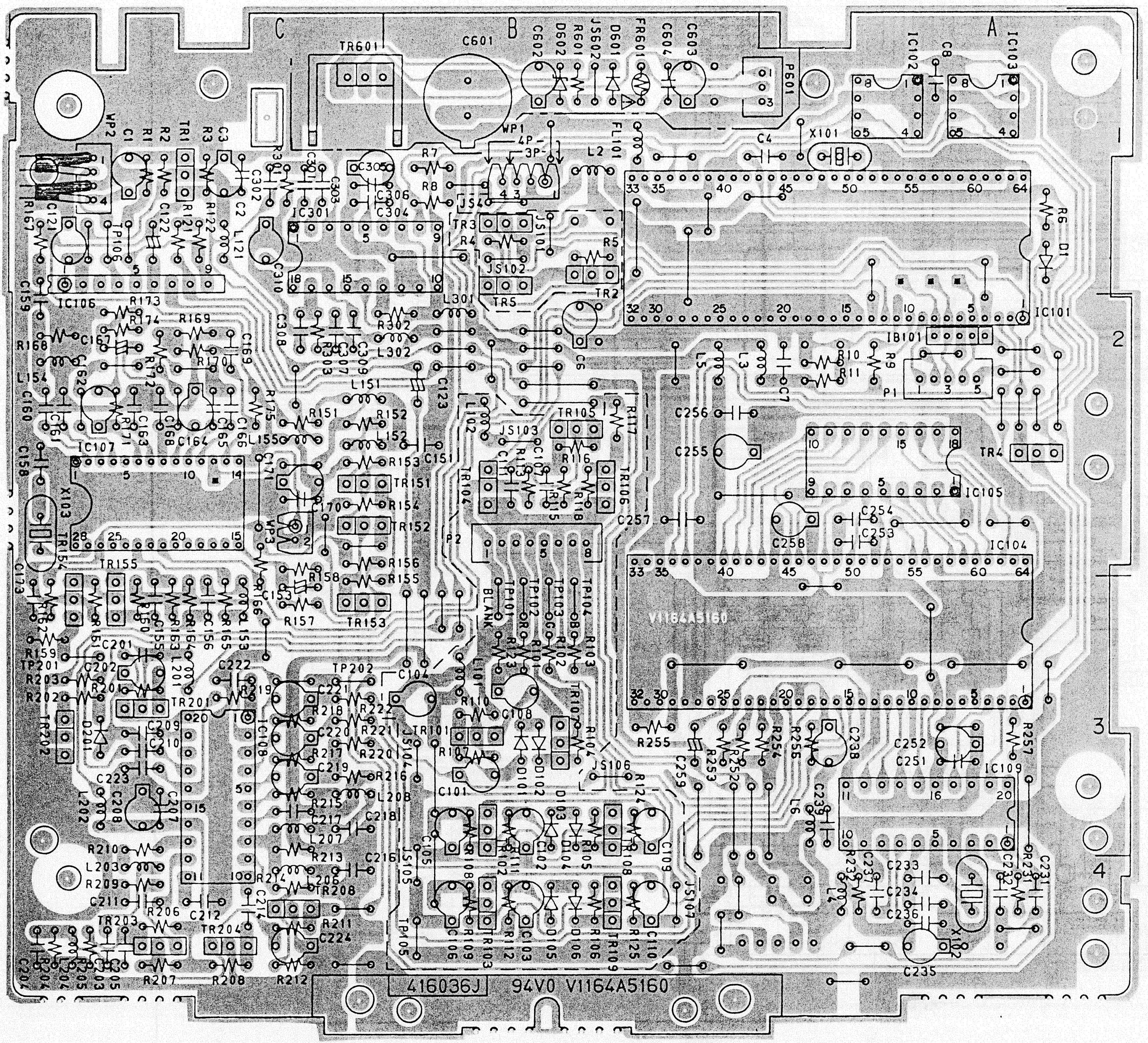
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W
ALL CAPACITORS IN μF
ALL INDUCTORS IN μH
ALL DIODES ARE 1SS131

INDICATED VOLTAGES WERE MEASURED WHEN A VPT SIGNAL IS BEING RECEIVED

VS-G55EOG-V
VPST/PDC
SCHEMATIC DIAGRAM

No.18-11 V116412M

A1



VPST/PDC PCB V1164A5160

PRINCIPAL PARTS LOCATION

ICs

IC101	A,B1
IC102	A1
IC103	A1
IC104	A,B3
IC105	A2
IC106	C1
IC107	C2
IC108	C3
IC109	A3
IC301	B,C1

WIREs

WP1	B1
WP2	C1
WP3	C2

CONNECTORs

P1	A2
P601	A,B1

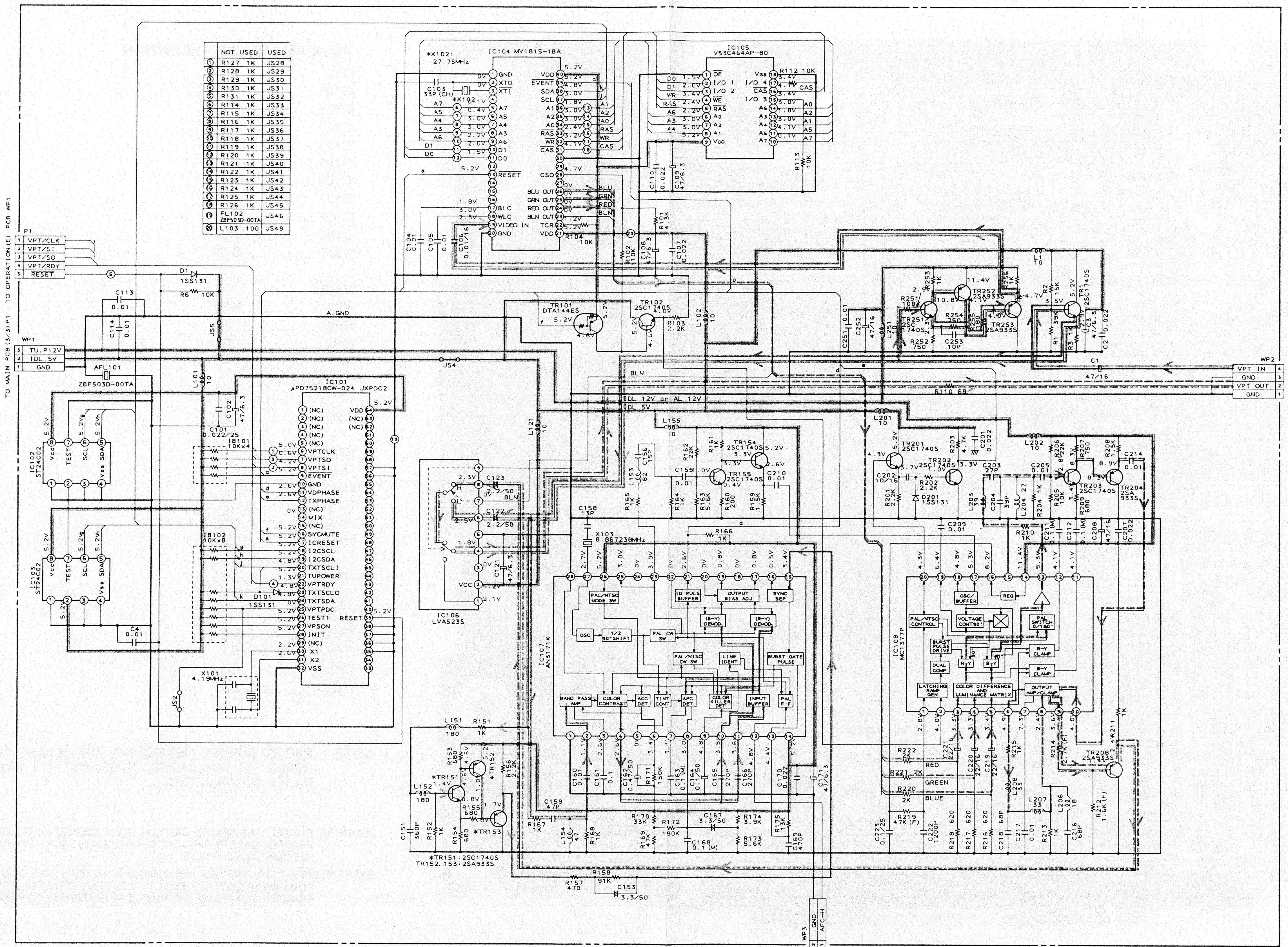
TRANSISTORs

TR1	C1
TR4	A2
TR151	C2
TR152	C2
TR153	C3
TR154	C3
TR155	C3
TR201	C3
TR202	C3
TR203	C4
TR204	C4
TR208	C4
TR601	C1

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER. REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY. REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ. POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL, NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT


IC101 μPD75218CW-024 JXPDC2
IC102 ST24C02
IC103 ST24C02
IC104 MV1815-18A
IC105 V53C464AP-80
IC106 LVA523S
IC107 AN3171K
IC108 MC1377P
TR101 DTA144ES
TR102 2SC1740S
TR151 2SC1740S
TR152, 153: 2SA933S
TR154 2SC1740S
TR155 2SC1740S
TR201 2SC1740S
TR202 2SC1740S
TR203 2SC1740S
TR204 2SA933S
TR208 2SA933S
TR251 2SC1740S
TR252 2SA933S
TR253 2SA933S
TR1 2SC1740S
X101 4.19MHz
X102 27.75MHz
X103 8.867238MHz
P1
VPT/CLK
VPT/SI
VPT/SO
VPT/RDY
RESET
TO OPERATION(E) PCB WP1
WP1
TU.P12V
IDL 5V
GND
TO MAIN PCB (3/3) P1
WP2
VPT IN
GND
VPT OUT
GND
TO MAIN(B) PCB P803
WP3
GND
AFC-H
TO MAIN(B) PCB P601
IDL 12V or AL 12V
IDL 5V
A.GND
BLN
RED
GREEN
BLUE

	NOT USED	USED
①	R127 1K	JS28
②	R128 1K	JS29
③	R129 1K	JS30
④	R130 1K	JS31
⑤	R131 1K	JS32
⑥	R114 1K	JS33
⑦	R115 1K	JS34
⑧	R116 1K	JS35
⑨	R117 1K	JS36
⑩	R118 1K	JS37
⑪	R119 1K	JS38
⑫	R120 1K	JS39
⑬	R121 1K	JS40
⑭	R122 1K	JS41
⑮	R123 1K	JS42
⑯	R124 1K	JS43
⑰	R125 1K	JS44
⑱	R126 1K	JS45
⑲	FL102 ZBF503D-00TA	JS46
⑳	L103 100	JS48

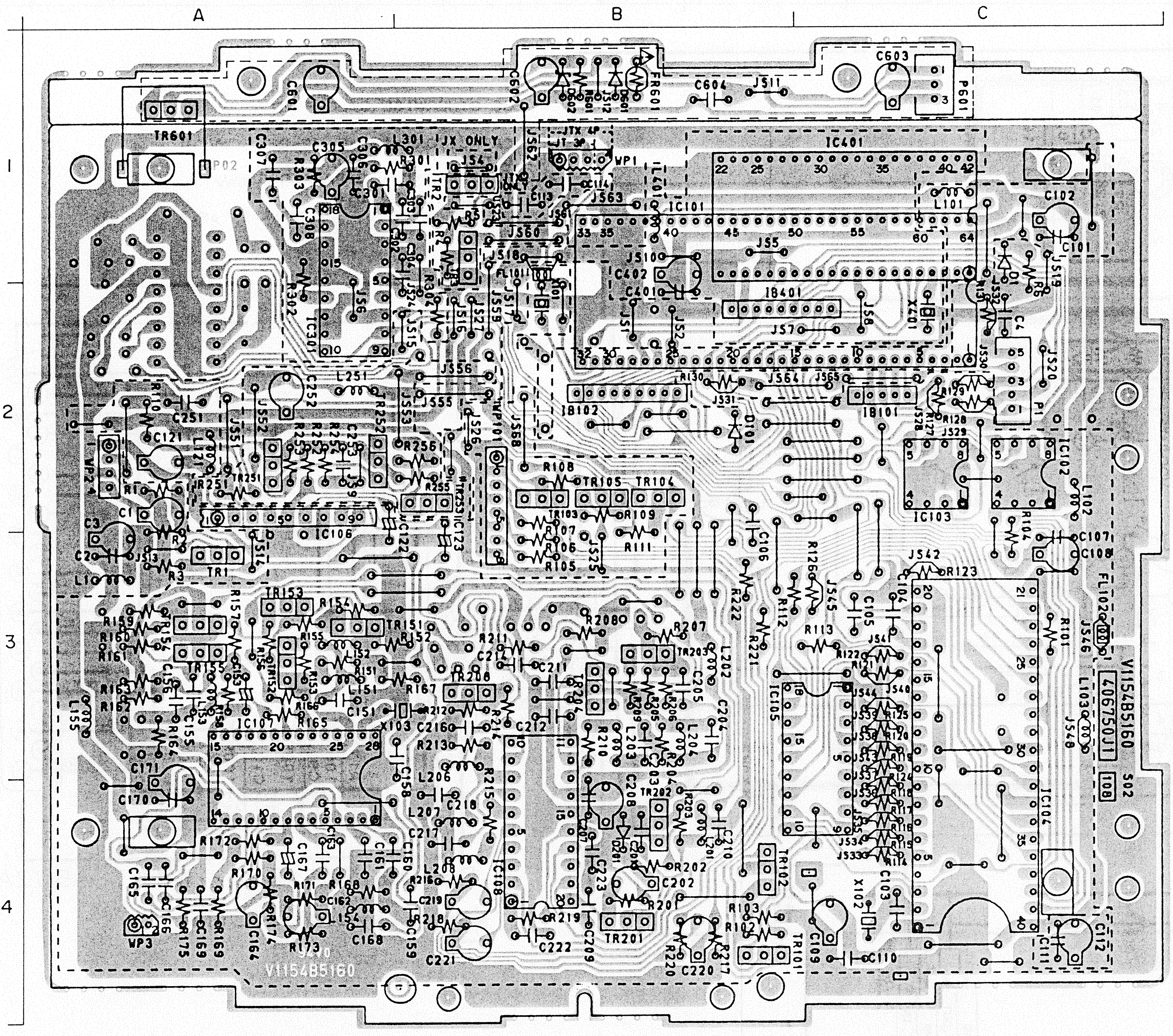
VPST/PDC PCB V1154B5160

B (POWER SUPPLY) LINE
Y IN (TUNER) SIGNAL
Y VPT SIGNAL
CHROMA IN (TUNER) SIGNAL
CHROMA VPT SIGNAL

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN μF

INDICATED VOLTAGES WERE MEASURED
WHEN A VPT SIGNAL WAS BEING RECEIVED.

VS-G54E0H-V
VPST/PDC
SCHEMATIC DIAGRAM
No.18-12 V117004M
A1


A
B
C
1
2
3
4
IC101
IC102
IC103
IC104
IC105
IC106
IC107
IC108
IC301
IC401
IB101
IB102
IB401
WP1
WP2
WP3
WP101
P1
P601
TR1
TR101
TR102
TR103
TR104
TR105
TR151
TR152
TR153
TR154
TR155
TR201
TR202
TR203
TR204
TR208
TR251
TR252
TR253
TR601
JX ONLY
JTX 4P
FR601
X101
X102
X103
V1154B5160
40675OJ1

VPST / PDC PCB V1154B5160J1

WARNING: ⚠INDICATES SAFETY CRITICAL COMPONENTS FOR CONTINUED SAFETY.
REPLACE SAFETY CRITICAL COMPONENTS ONLY WITH MANUFACTURER'S
RECOMMENDED PARTS

AVERTISSEMENT: ⚠IL INDIQUE LES COMPOSANTS CRITIQUES DE SÉCURITÉ.
POUR MAINTENIR LE DEGRÉ DE SÉCURITÉ DE L'APPAREIL,
NE REMPLACER QUE DES PIÈCES RECOMMANDEES PAR LE FABRICANT

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER. REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.

PRINCIPAL PARTS LOCATION

ICs

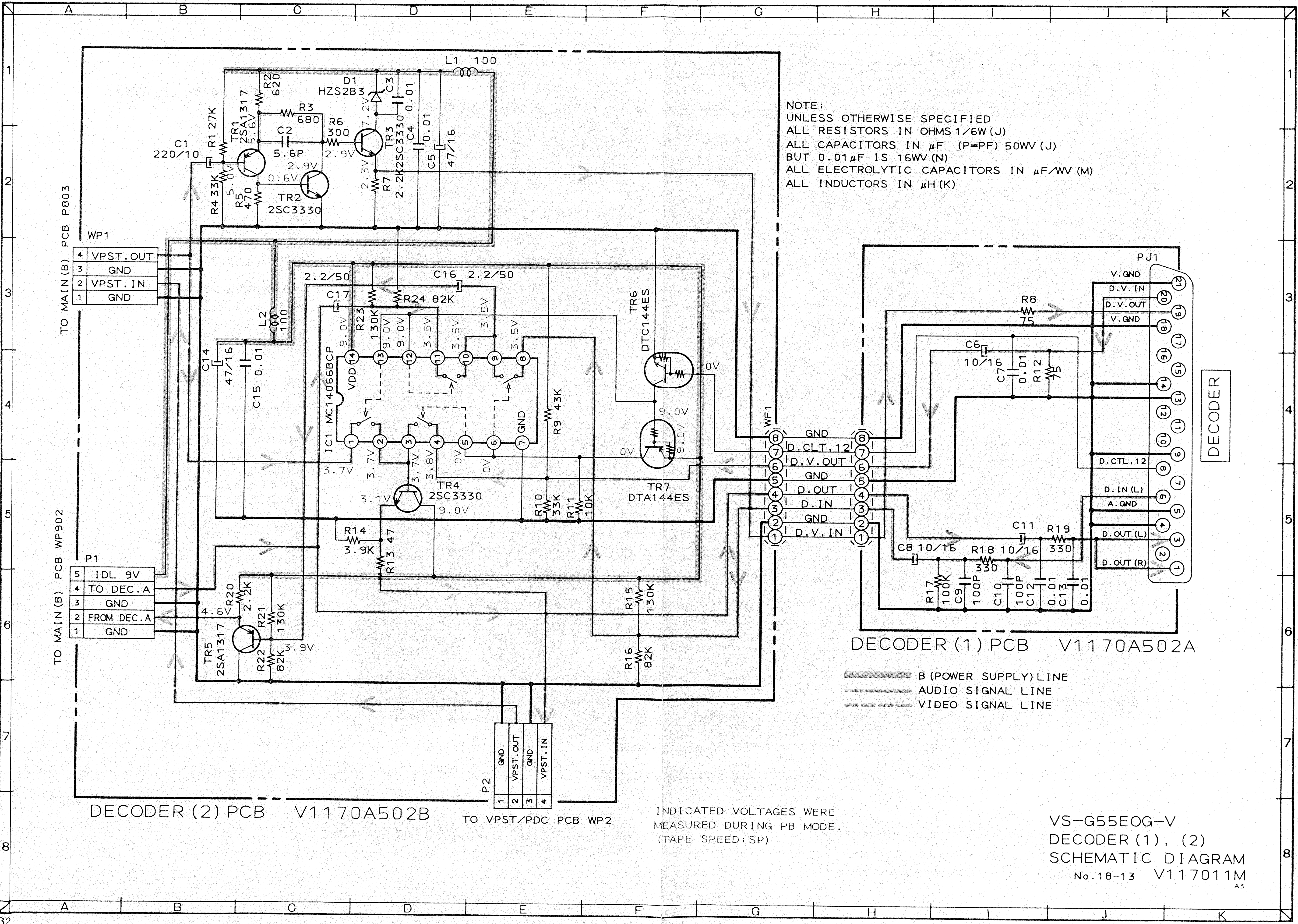
IC101	B,C1,2
IC102	C2
IC103	C2
IC104	C3,4
IC105	C3,4
IC106	A2
IC107	A3,4
IC108	B3,4
IC301	A1,2
IC401	B,C1

CONNECTORs & WIREs

WP1	B1
WP2	A2
WP3	A4
WP101	B2,3
P1	C2
P601	C1

TRANSISTORs

TR1	A1
TR101	B4
TR102	B4
TR103	B2
TR104	B2
TR105	B2
TR151	A3
TR152	A3
TR153	A3
TR154	A3
TR155	A3
TR201	B4
TR202	B4
TR203	B3
TR204	B3
TR208	B3
TR251	A2
TR252	A2
TR253	B2
TR601	A1


A
B
C
D
E
F
G
H
I
J
K
1
2
3
4
5
6
7
8
L1 100
D1 HZS2B3
R2 620
R3 680
R6 300
C3 0.01
C4 0.01
C5 47/16
TR3 2SC3330
7.2V
R1 27K
TR1 2SA1317
5.6V
C1 220/10
C2 5.6P
2.9V
0.6V
5.0V
TR2 2SC3330
R4 33K
R5 470
R7 2.2K
2.3V
TO MAIN(B) PCB P803
WP1
4 VPST.OUT
3 GND
2 VPST.IN
1 GND
L2 100
C14 47/16
C15 0.01
2.2/50
C16 2.2/50
C17
R23 130K
R24 82K
IC1 MC14066BCP
VDD
GND
9.0V
3.5V
3.7V
3.8V
0V
TR4 2SC3330
3.1V
9.0V
R14 3.9K
R13 47
R9 43K
R10 33K
R11 10K
TR6 DTC144ES
TR7 DTA144ES
WF1
GND
D.CLT.12
D.V.OUT
GND
D.OUT
D.IN
GND
D.V.IN
TO MAIN (B) PCB WP902
P1
5 IDL 9V
4 TO DEC.A
3 GND
2 FROM DEC.A
1 GND
R20 2.2K
R21 130K
R22 82K
TR5 2SA1317
4.6V
3.9V
R15 130K
R16 82K
P2
1 GND
2 VPST.OUT
3 GND
4 VPST.IN
TO VPST/PDC PCB WP2
DECODER (2) PCB V1170A502B
PJ1
V.GND
D.V.IN
D.V.OUT
V.GND
D.CTL.12
D.IN(L)
A.GND
D.OUT(L)
D.OUT(R)
R8 75
C6 10/16
C7 0.01
R12 75
C8 10/16
R17 100K
C9 100P
R18 330
C10 100P
C11 10/16
R19 330
C12 0.01
C13 0.01
DECODER
DECODER (1) PCB V1170A502A

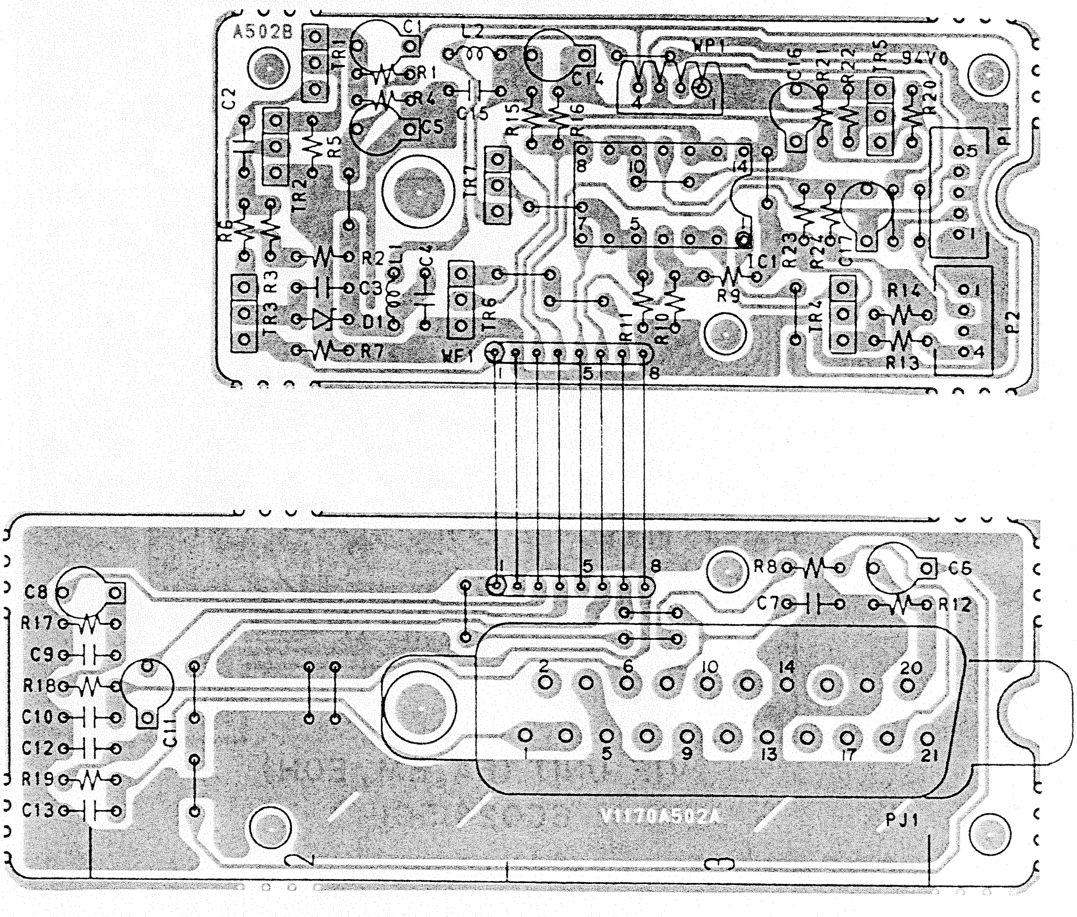
NOTE;
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/6W (J)
ALL CAPACITORS IN μF (P=PF) 50WV (J)
BUT 0.01μF IS 16WV (N)
ALL ELECTROLYTIC CAPACITORS IN μF/WV (M)
ALL INDUCTORS IN μH (K)

▨	B (POWER SUPPLY) LINE
▨	AUDIO SIGNAL LINE
▨	VIDEO SIGNAL LINE

INDICATED VOLTAGES WERE
MEASURED DURING PB MODE.
(TAPE SPEED: SP)

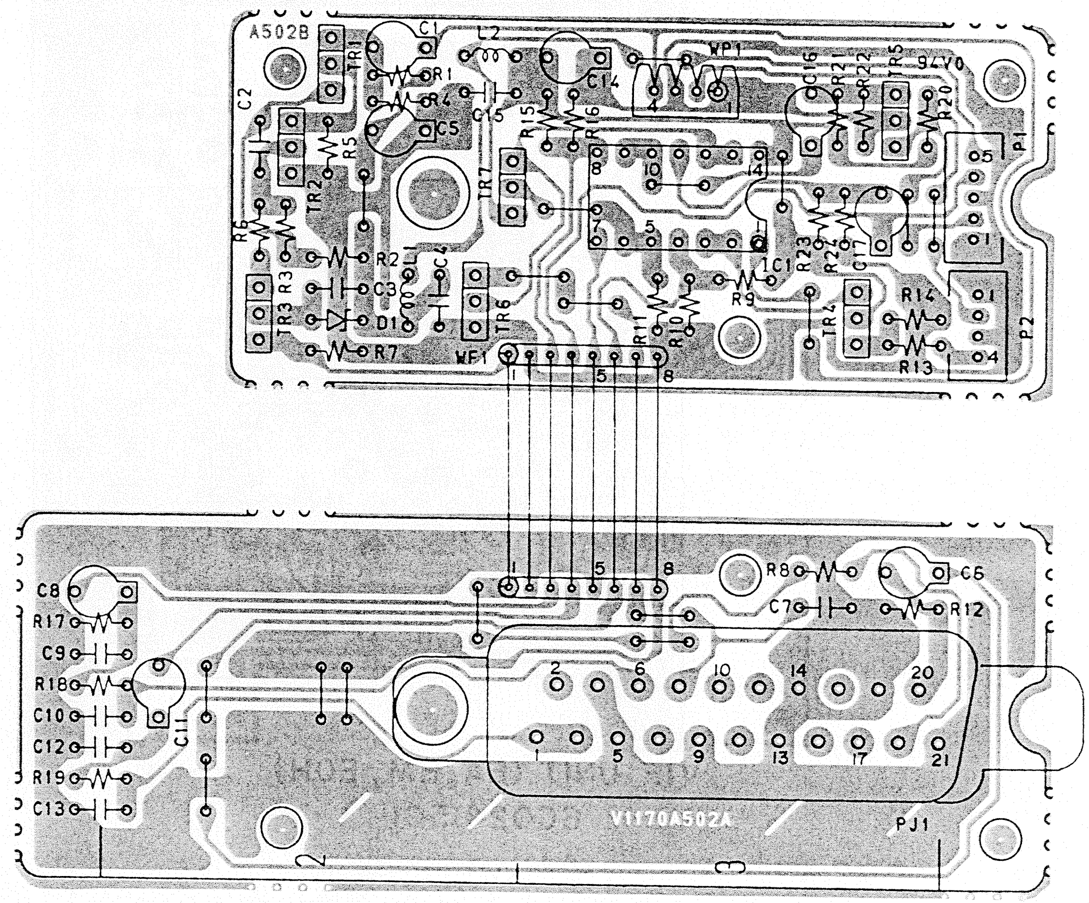
VS-G55EOG-V
DECODER (1), (2)
SCHEMATIC DIAGRAM
No.18-13 V117011M
A3

DECODER(2) PCB　V1170A502B


A502B
TR1
C1
L2
R1
R4
C15
C14
WP1
C16
R21
R22
TR5
94V0
R20
P1
C2
R5
C5
TR2
TR7
R15
R16
8
10
14
7
5
1
R6
R2
L1
C4
R3
C3
TR3
D1
TR6
R7
WF1
R11
R10
R9
IC1
R23
R24
C17
TR4
R14
R13
P2
8
5
1
C8
R17
C9
R18
C10
C12
R19
C13
C11
R8
C6
C7
R12
2
6
10
14
20
1
5
9
13
17
21
V1170A502A
PJ1

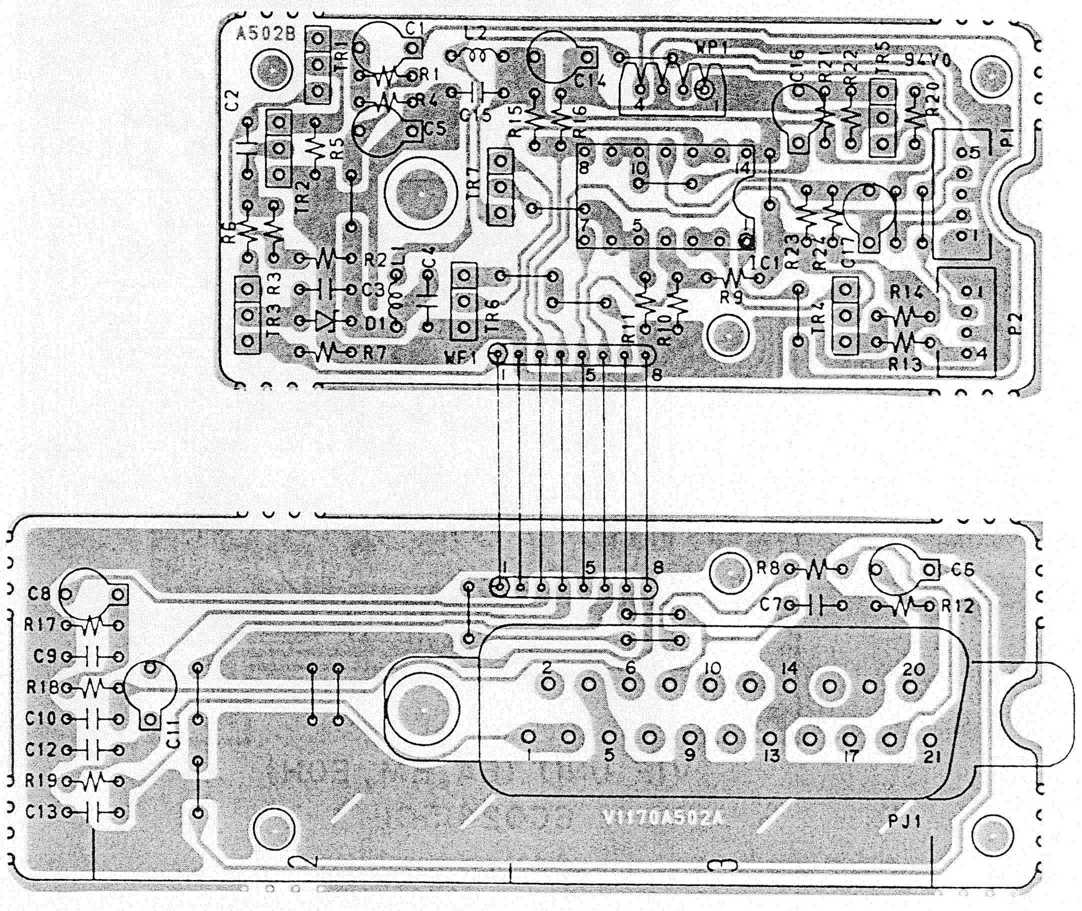
DECODER(1) PCB　V1170A502A

DECODER(2) PCB V1170A502B

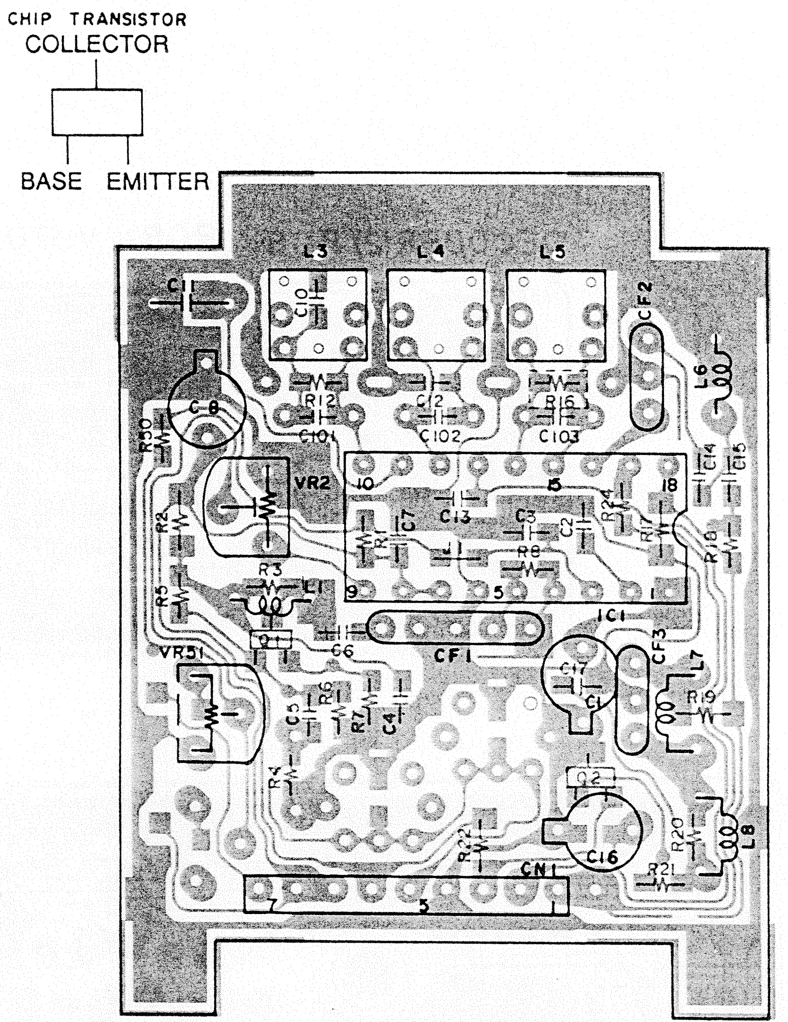

A502B
TR1
C1
L2
R1
R4
C2
C5
C14
C15
WP1
R15
R16
R5
TR2
TR7
C16
R21
R22
TR5
94V0
R20
P1
R6
R2
L1
C4
R3
C3
TR3
D1
R7
TR6
WF1
R11
R10
R9
IC1
R23
R24
C17
TR4
R14
R13
P2
C8
R17
C9
R18
C10
C11
C12
R19
C13
R8
C6
C7
R12
PJ1
V1170A502A

DECODER(1) PCB V1170A502A

DECODER(2) PCB V1170A502B

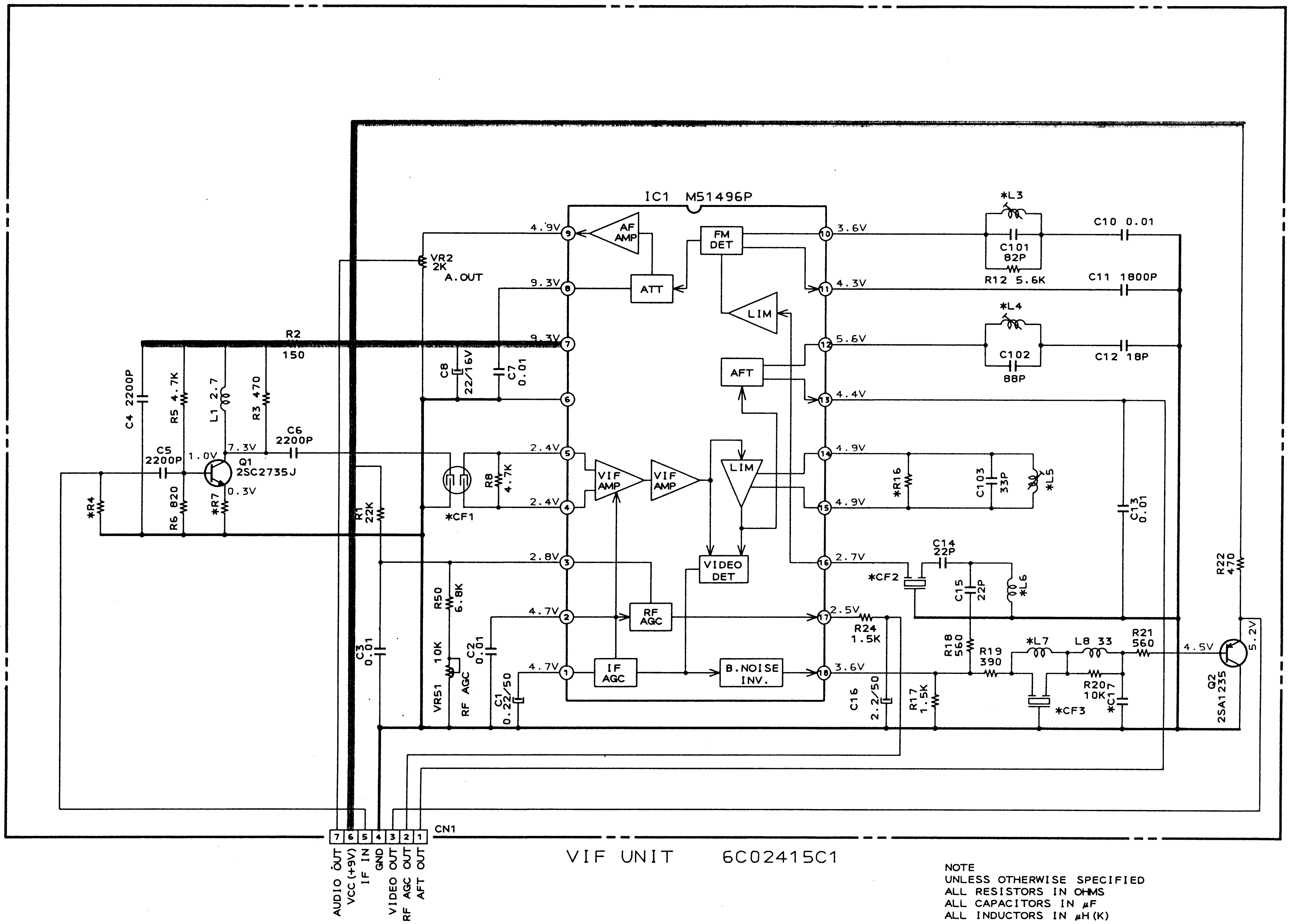

A502B
C1
L2
TR1
R1
R4
C15
C14
WP1
C16
R21
R22
TR5
9.4V0
R20
P1
C2
R5
C5
TR2
R15
R16
R6
TR7
R3
R2
C3
C4
D1
TR3
R7
WF1
TR6
R11
R10
R9
IC1
R23
R24
C17
R14
R13
TR4
P2
C8
R17
C9
R18
C10
C12
R19
C13
C11
R8
C6
C7
R12
PJ1
V1170A502A

DECODER(1) PCB V1170A502A


CHIP TRANSISTOR
COLLECTOR
BASE
EMITTER
L3
L4
L5
C1
C10
CF2
L6
C8
R12
C12
R16
C101
C102
C103
R30
VR2
10
15
18
C14
C15
C7
C13
C3
R24
R2
R1
C2
R17
R18
L1
R8
R3
R5
9
5
1
IC1
VR51
Q1
C6
CF1
CF3
C17
L7
C5
R6
C11
R19
R7
C4
R4
Q2
R20
L8
R22
C16
CN1
R21

VIF UNIT (EA, EM, EOH)
6C02415C1

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER.
REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT
PARTS INFORMATION.


IC1 M51496P
AF AMP
FM DET
ATT
LIM
AFT
VIF AMP
VIF AMP
LIM
VIDEO DET
RF AGC
IF AGC
B.NOISE INV.
4.9V
9.3V
9.3V
2.4V
2.4V
2.8V
4.7V
4.7V
3.6V
4.3V
5.6V
4.4V
4.9V
4.9V
2.7V
2.5V
3.6V
VR2 2K A.OUT
R2 150
C8 22/16V
C7 0.01
C4 2200P
R5 4.7K
L1 2.7
R3 470
C6 2200P
C5 2200P
1.0V
7.3V
0.3V
Q1 2SC2735J
*R4
R6 820
*R7
R1 22K
R8 4.7K
*CF1
R50 6.8K
VR51 10K RF AGC
C2 0.01
C1 0.22/50
C3 0.01
*L3
C101 82P
R12 5.6K
C10 0.01
C11 1800P
*L4
C102 88P
C12 18P
*R16
C103 33P
*L5
C13 0.01
C14 22P
*CF2
C15 22P
*L6
R24 1.5K
C16 2.2/50
R17 1.5K
R18 560
R19 390
*L7
L8 33
R207 10K
*CF3
*C17
R21 560
R22 470
4.5V
5.2V
Q2 2SA1235
CN1
7 6 5 4 3 2 1
AUDIO OUT
VCC (+9V)
IF IN
GND
VIDEO OUT
RF AGC OUT
AFT OUT
VIF UNIT 6C02415C1

*	EM	EOH	EA
CF1	SAF38.9 MZ70Z	SAF38.9 MZW70Z	SAF36.9MZ70Z
CF2	SFE 5.5MBF	←	←
CF3	TPS 5.5MB2	TPS 5.5MW	←
L 3	6F16437 A1	←	←
L 4	6F16435 A1	←	6F16436A2
L 5	6F16436 A1	←	6F16441A1
L 6	18μ	←	←
L 7	18μ	15μ	18μ
R 4	100	100	150
R 7	22	←	←
R16	10K	—	10K
C17	CH12P	←	←

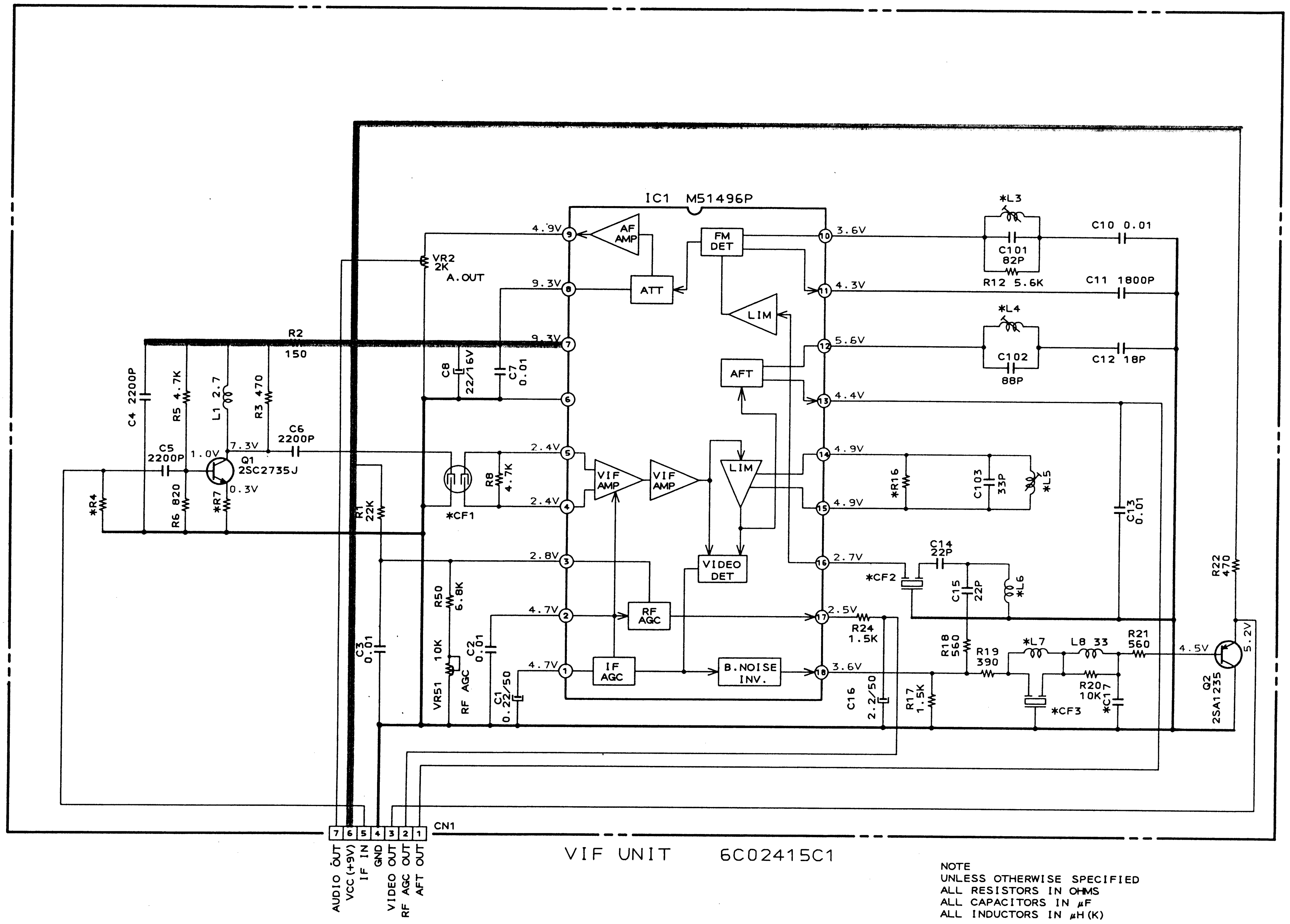
NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN μF
ALL INDUCTORS IN μH (K)

▬ B (POWER SUPPLY) LINE

INDICATED VOLTAGES WERE MEASURED
DURING E-E (STOP) MODE.
(WHEN A STATION IS TUNED)

VS-G51EA/EM/EOH
VIF UNIT
SCHEMATIC DIAGRAM

No.18-14 V117012M
A3


IC1 M51496P
AF AMP
FM DET
ATT
LIM
AFT
VIF AMP
VIF AMP
LIM
VIDEO DET
RF AGC
IF AGC
B.NOISE INV.
4.9V
9.3V
9.3V
2.4V
2.4V
2.8V
4.7V
4.7V
3.6V
4.3V
5.6V
4.4V
4.9V
4.9V
2.7V
2.5V
3.6V
VR2 2K
A.OUT
R2 150
C4 2200P
R5 4.7K
L1 2.7
R3 470
C6 2200P
C5 2200P
1.0V
7.3V
Q1 2SC2735J
0.3V
*R4
R6 820
*R7
R1 22K
C8 22/16V
C7 0.01
R8 4.7K
*CF1
R50 6.8K
C3 0.01
VR51 10K
RF AGC
C2 0.01
C1 0.22/50
*L3
C101 82P
R12 5.6K
C10 0.01
C11 1800P
*L4
C102 88P
C12 18P
*R16
C103 33P
*L5
C13 0.01
C14 22P
*CF2
C15 22P
*L6
R24 1.5K
C16 2.2/50
R17 1.5K
R18 560
R19 390
*L7
L8 33
R20 10K
*C17
*CF3
R21 560
4.5V
5.2V
R22 470
Q2 2SA1235
CN1
7 6 5 4 3 2 1
AUDIO OUT
VCC (+9V)
IF IN
GND
VIDEO OUT
RF AGC OUT
AFT OUT
VIF UNIT 6C02415C1

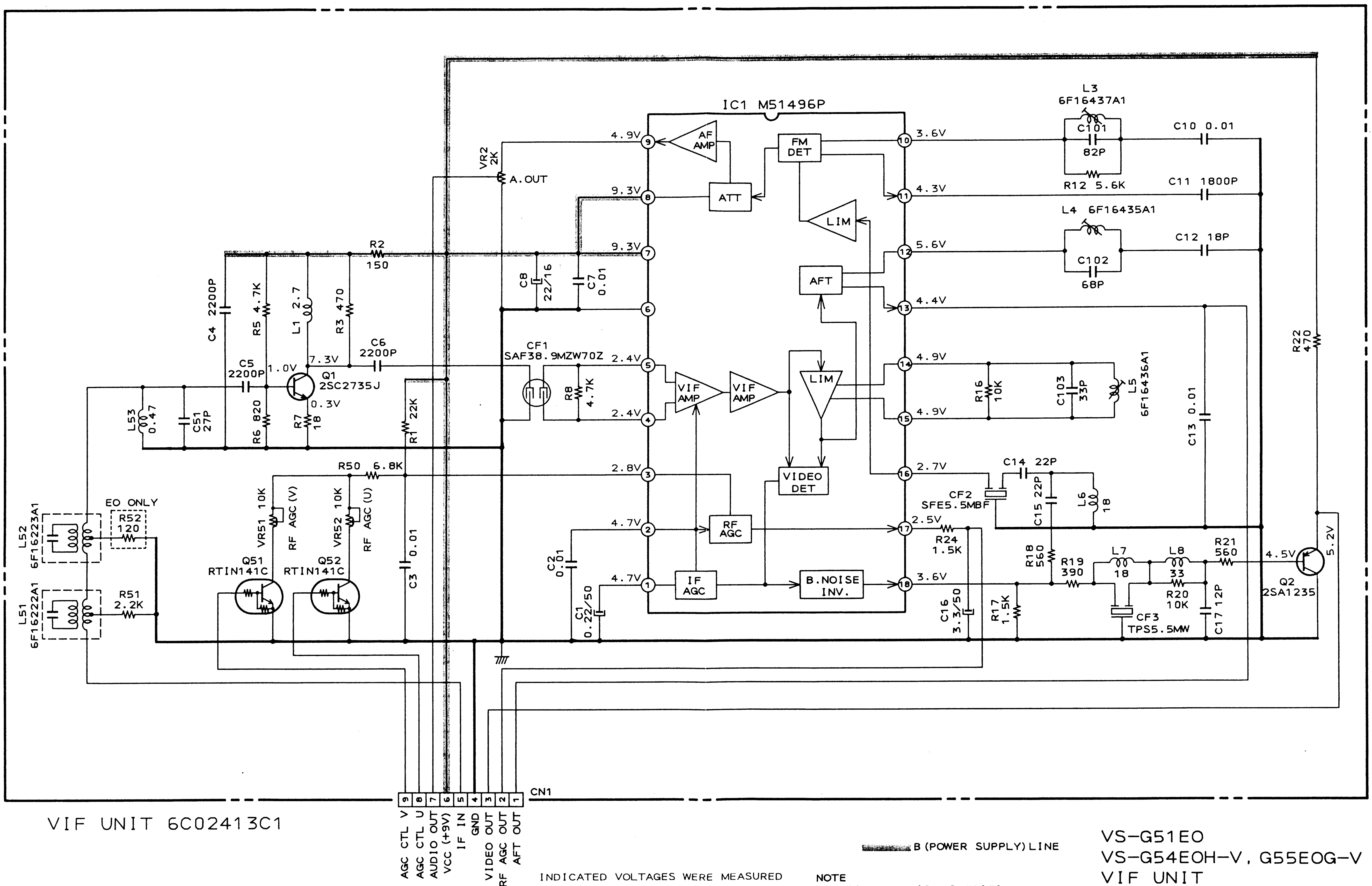
*	EM	EOH	EA
CF1	SAF38.9 MZ70Z	SAF38.9 MZW70Z	SAF36.9MZ70Z
CF2	SFE 5.5MBF	←	←
CF3	TPS 5.5MB2	TPS 5.5MW	←
L 3	6F16437 A1	←	←
L 4	6F16435 A1	←	6F16436A2
L 5	6F16436 A1	←	6F16441A1
L 6	18μ	←	←
L 7	18μ	15μ	18μ
R 4	100	100	150
R 7	22	←	←
R16	10K	—	10K
C17	CH12P	←	←

▬ B (POWER SUPPLY) LINE

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN μF
ALL INDUCTORS IN μH (K)

INDICATED VOLTAGES WERE MEASURED
DURING E-E (STOP) MODE.
(WHEN A STATION IS TUNED)

VS-G51EA/EM/EOH
VIF UNIT
SCHEMATIC DIAGRAM
No.18-14 V117012M
A3

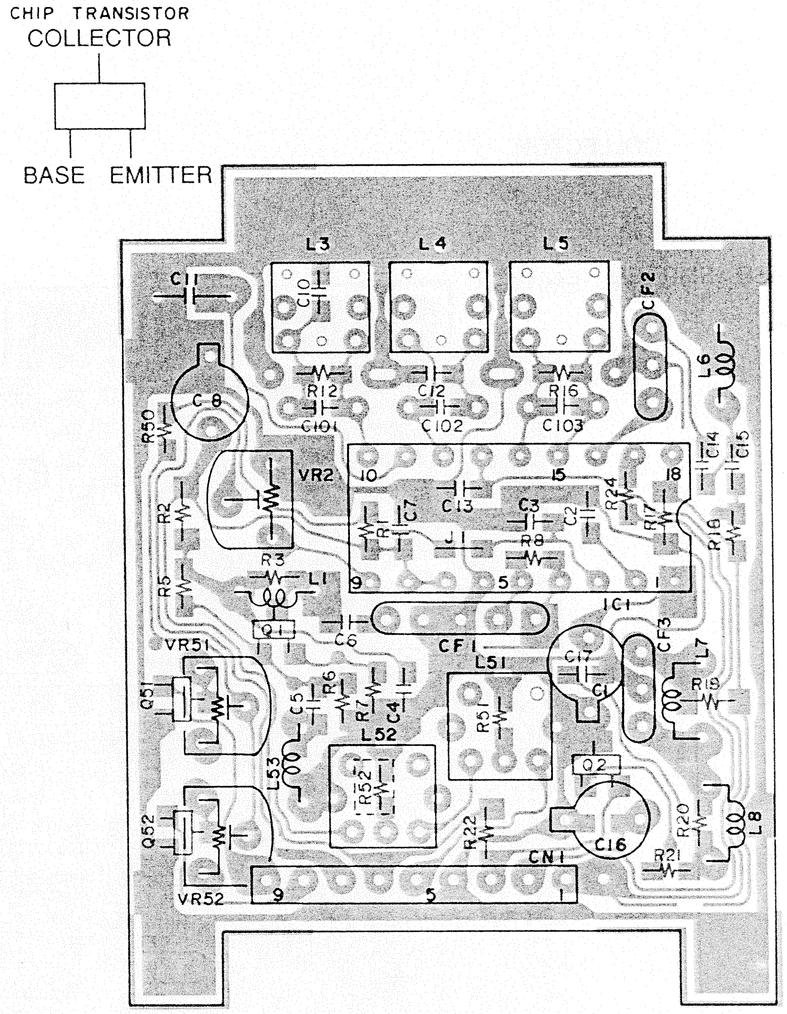

IC1 M51496P
AF AMP
FM DET
ATT
LIM
AFT
VIF AMP
VIF AMP
LIM
VIDEO DET
RF AGC
IF AGC
B.NOISE INV.
VR2 2K
A.OUT
R2 150
C4 2200P
R5 4.7K
L1 2.7
R3 470
C6 2200P
C5 2200P
Q1 2SC2735J
7.3V
1.0V
0.3V
R6 820
R7 18
L53 0.47
C51 27P
C8 22/16
C7 0.01
CF1 SAF38.9MZW70Z
R8 4.7K
R1 22K
R50 6.8K
C3 0.01
C2 0.01
C1 0.22/50
EO ONLY
R52 120
R51 2.2K
L52 6F16223A1
L51 6F16222A1
Q51 RTIN141C
Q52 RTIN141C
VR51 10K
RF AGC (V)
VR52 10K
RF AGC (U)
L3 6F16437A1
C101 82P
R12 5.6K
C10 0.01
C11 1800P
L4 6F16435A1
C102 68P
C12 18P
R16 10K
C103 33P
L5 6F16436A1
C13 0.01
R22 470
C14 22P
CF2 SFE5.5MBF
C15 22P
L6 18
R24 1.5K
C16 3.3/50
R17 1.5K
R18 560
R19 390
L7 18
L8 33
R20 10K
CF3 TPS5.5MW
C17 12P
R21 560
Q2 2SA1235
4.5V
5.2V
4.9V
9.3V
9.3V
2.4V
2.4V
2.8V
4.7V
4.7V
3.6V
4.3V
5.6V
4.4V
4.9V
4.9V
2.7V
2.5V
3.6V
CN1
AGC CTL V
AGC CTL U
AUDIO OUT
VCC (+9V)
IF IN
GND
VIDEO OUT
RF AGC OUT
AFT OUT
VIF UNIT 6C02413C1

▬ B (POWER SUPPLY) LINE

INDICATED VOLTAGES WERE MEASURED DURING E-E (STOP) MODE.
(WHEN A STATION IS TUNED)

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN μF
ALL INDUCTORS IN μH (K)

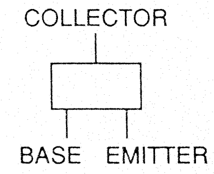
VS-G51EO
VS-G54EOH-V, G55EOG-V
VIF UNIT
SCHEMATIC DIAGRAM
No.18-15 V117012M
A3

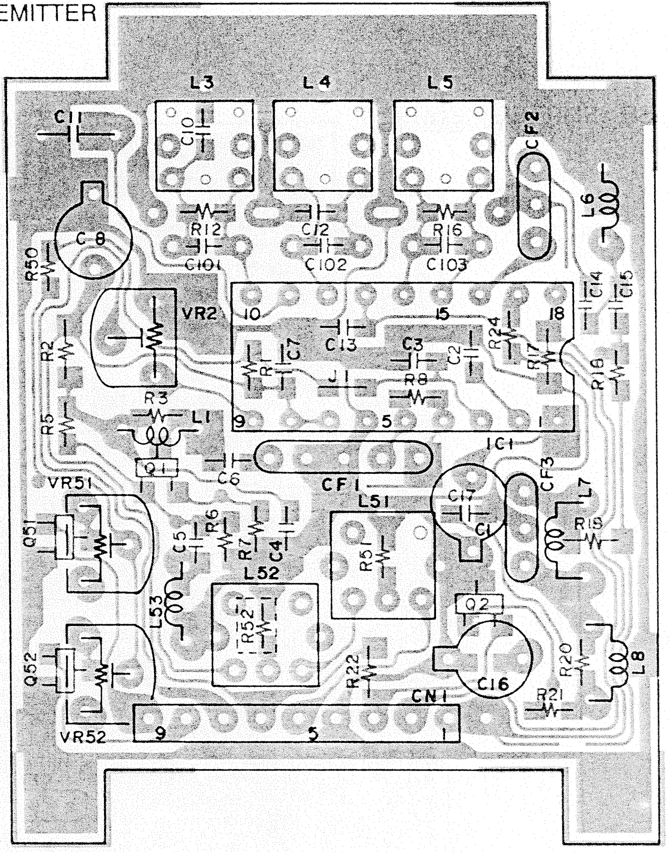

CHIP TRANSISTOR
COLLECTOR
BASE
EMITTER
L3
L4
L5
C11
C10
CF2
L6
C8
R12
C12
R16
C101
C102
C103
R50
C14
C15
VR2
10
15
18
C7
C13
C3
C2
R24
R17
R18
R2
R1
J1
R8
R3
L1
9
5
1
R5
IC1
Q1
C6
CF1
CF3
L7
VR51
L51
C17
C1
R19
Q51
R6
C5
R7
C4
R51
L52
L53
R52
Q2
L8
R20
Q52
R22
C16
CN1
R21
VR52
9
5
1

VIF UNIT (EO, EOH-V, EOG-V)
6C02413C1

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER. REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.

CHIP TRANSISTOR

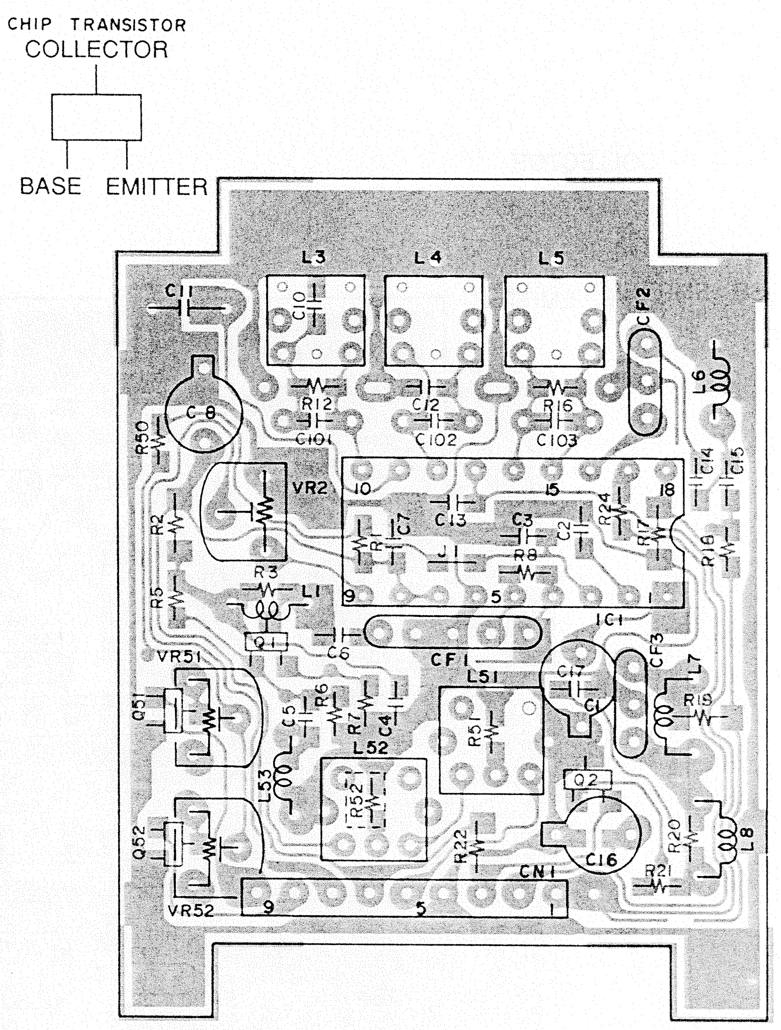

COLLECTOR
BASE
EMITTER


L3
L4
L5
C11
C10
CF2
L6
R12
C12
R16
C101
C102
C103
C8
R50
C14
C15
VR2
10
15
18
C13
C3
R24
C7
R1
C2
R17
R2
R8
R19
J
R3
L1
9
5
1
R5
IC1
Q1
C6
CF1
CF3
L7
VR51
L51
C17
Q51
R6
C1
R18
C5
R7
C4
R51
L52
L53
R52
Q2
R22
R20
L8
Q52
C16
R21
CN1
VR52
9
5
1

VIF UNIT (E0, E0H-V, E0G-V)

6C02413C1

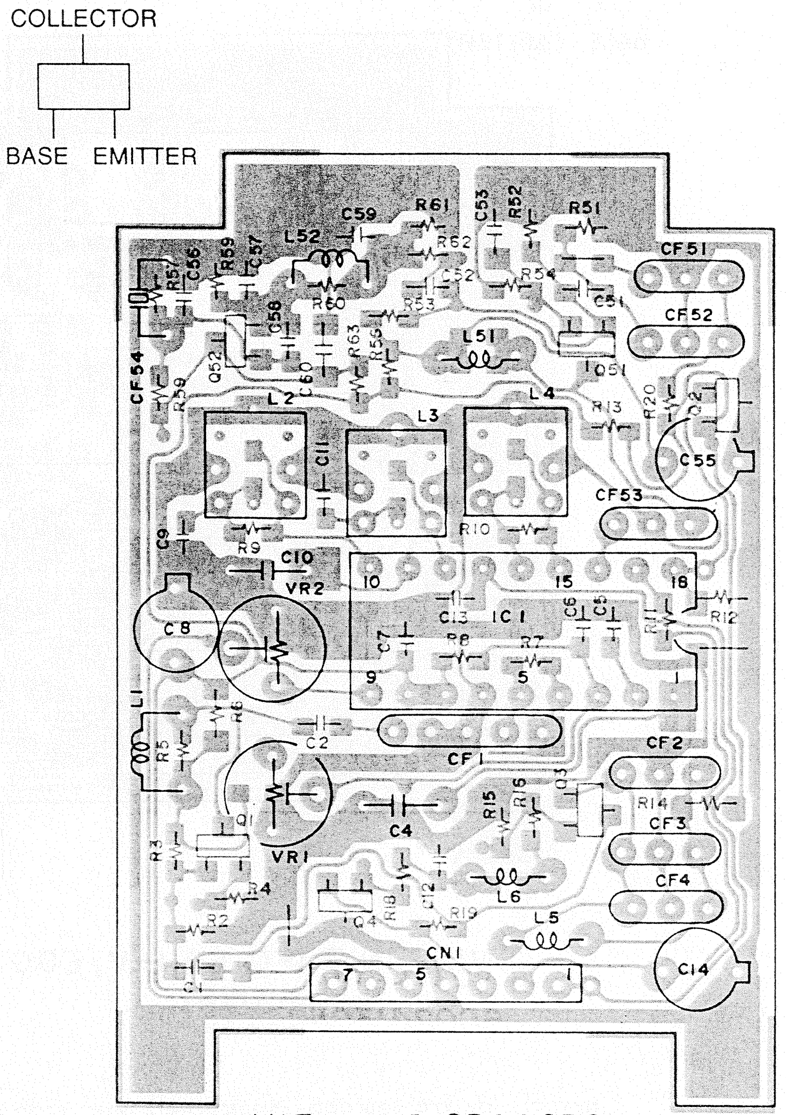
NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER. REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.


CHIP TRANSISTOR
COLLECTOR
BASE
EMITTER
L3
L4
L5
C11
C10
CF2
L6
C8
R12
C12
R16
C101
C102
C103
R50
C14
C15
VR2
10
15
18
C13
C3
R24
R17
R2
R1
C7
C2
R18
J1
R8
R3
L1
9
5
1
R5
IC1
Q1
C6
CF1
CF3
VR51
L51
C17
L7
Q51
R6
C1
R19
C5
R7
C4
R51
L52
L53
Q2
R521
L8
Q52
R20
R22
C16
CN1
R21
VR52
9
5
1

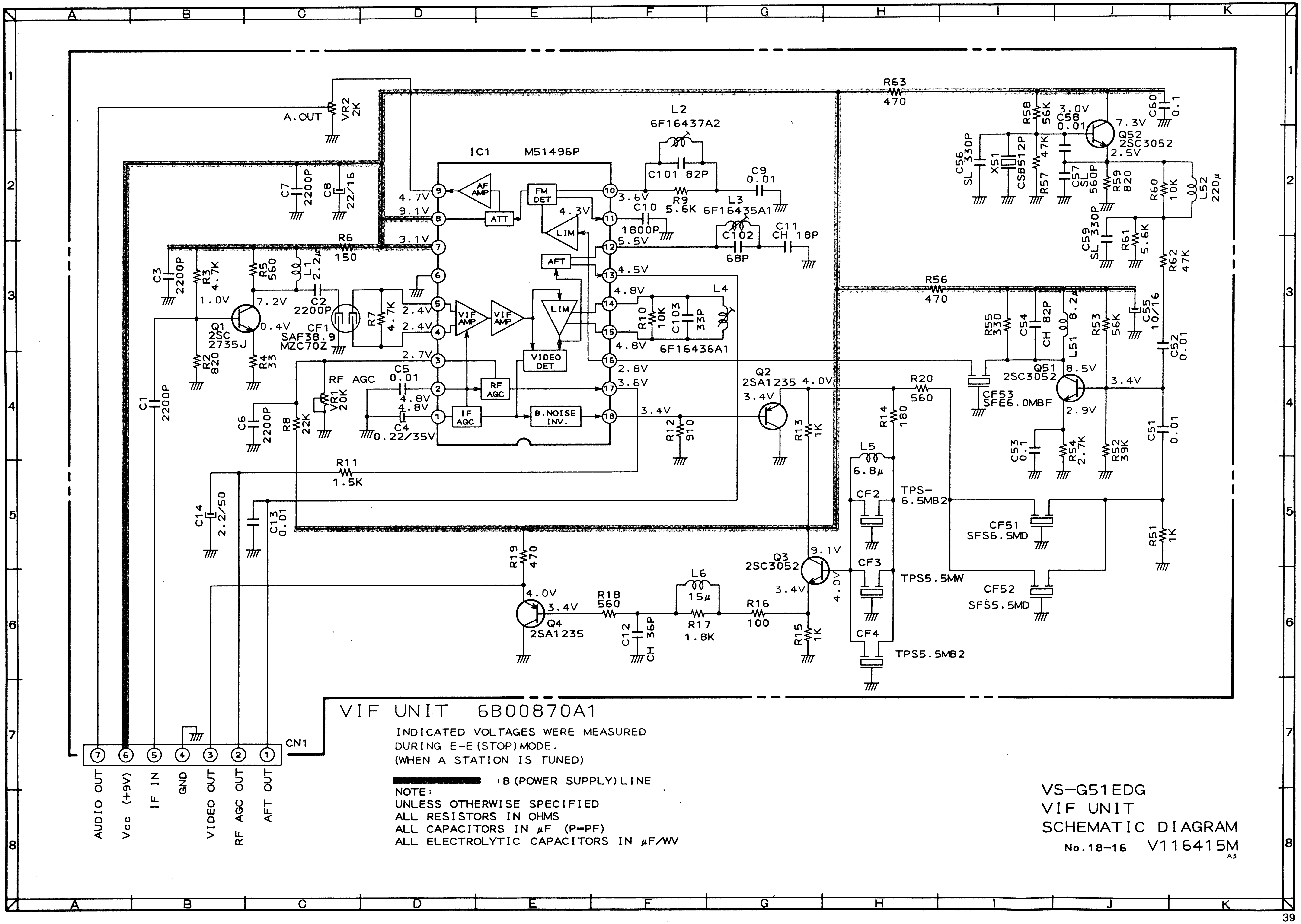
VIF UNIT (E0, E0H-V, E0G-V)

6C02413C1

NOTE : PARTS DIFFER DEPENDING ON MODEL NUMBER. REFER TO SCHEMATIC DIAGRAMS FOR PERTINENT PARTS INFORMATION.


COLLECTOR
BASE
EMITTER
C59
R61
C53
R52
R51
R62
L52
C52
R54
CF51
R57
C56
R59
C57
R60
R53
C51
CF52
C58
R63
R56
L51
Q52
C60
Q51
CF54
L2
L4
R13
R20
Q2
L3
C11
C55
CF53
C9
R9
R10
C10
VR2
10
15
18
R12
R11
C8
C13
IC1
C6
C5
C7
R8
R7
9
5
L1
R6
R5
C2
CF1
CF2
Q3
R16
R15
R14
Q1
C4
CF3
R3
VR1
R4
C12
L6
CF4
R18
R19
L5
R2
Q4
CN1
7
5
1
C14
C1

VIF UNIT 6B00870A1
(EDG ONLY)


A
B
C
D
E
F
G
H
I
J
K
1
2
3
4
5
6
7
8
IC1 M51496P
AF AMP
FM DET
ATT
LIM
AFT
VIF AMP
VIDEO DET
RF AGC
IF AGC
B.NOISE INV.
A.OUT
VR2 2K
C7 2200P
C8 22/16
R6 150
C3 2200P
R3 4.7K
R5 560
L1 2.2μ
C2 2200P
Q1 2SC 2735J
R2 820
R4 33
CF1 SAF38.9 MZC70Z
R7 4.7K
RF AGC
VR1 20K
C5 0.01
C4 0.22/35V
C6 2200P
R8 22K
C1 2200P
R11 1.5K
C14 2.2/50
C13 0.01
L2 6F16437A2
C101 82P
R9 5.6K
C9 0.01
L3 6F16435A1
C10 1800P
C102 68P
C11 CH 18P
L4 6F16436A1
R10 10K
C103 33P
R12 910
Q2 2SA1235
R13 1K
R19 470
Q4 2SA1235
R18 560
C12 CH 36P
L6 15μ
R17 1.8K
R16 100
Q3 2SC3052
R15 1K
R14 180
L5 6.8μ
CF2 TPS-6.5MB2
CF3 TPS5.5MW
CF4 TPS5.5MB2
R20 560
R63 470
R56 470
R58 56K
C58 0.01
Q52 2SC3052
C60 0.1
C56 SL 330P
X51 CSB512P
R57 47K
C57 SL 560P
R59 820
R60 10K
L52 220μ
C59 SL 330P
R61 5.6K
R62 47K
R55 330
C54 CH 82P
L51 8.2μ
R53 56K
C55 10/16
C52 0.01
CF53 SFE6.0MBF
Q51 2SC3052
C53 0.1
R54 2.7K
R52 39K
C51 0.01
CF51 SFS6.5MD
CF52 SFS5.5MD
R51 1K
4.7V
9.1V
9.1V
2.4V
2.4V
2.7V
4.8V
4.8V
1.0V
7.2V
0.4V
3.6V
4.3V
5.5V
4.5V
4.8V
4.8V
2.8V
3.6V
3.4V
4.0V
3.4V
4.0V
3.4V
9.1V
3.4V
4.0V
3.0V
7.3V
2.5V
8.5V
3.4V
2.9V
CN1
AUDIO OUT
Vcc (+9V)
IF IN
GND
VIDEO OUT
RF AGC OUT
AFT OUT

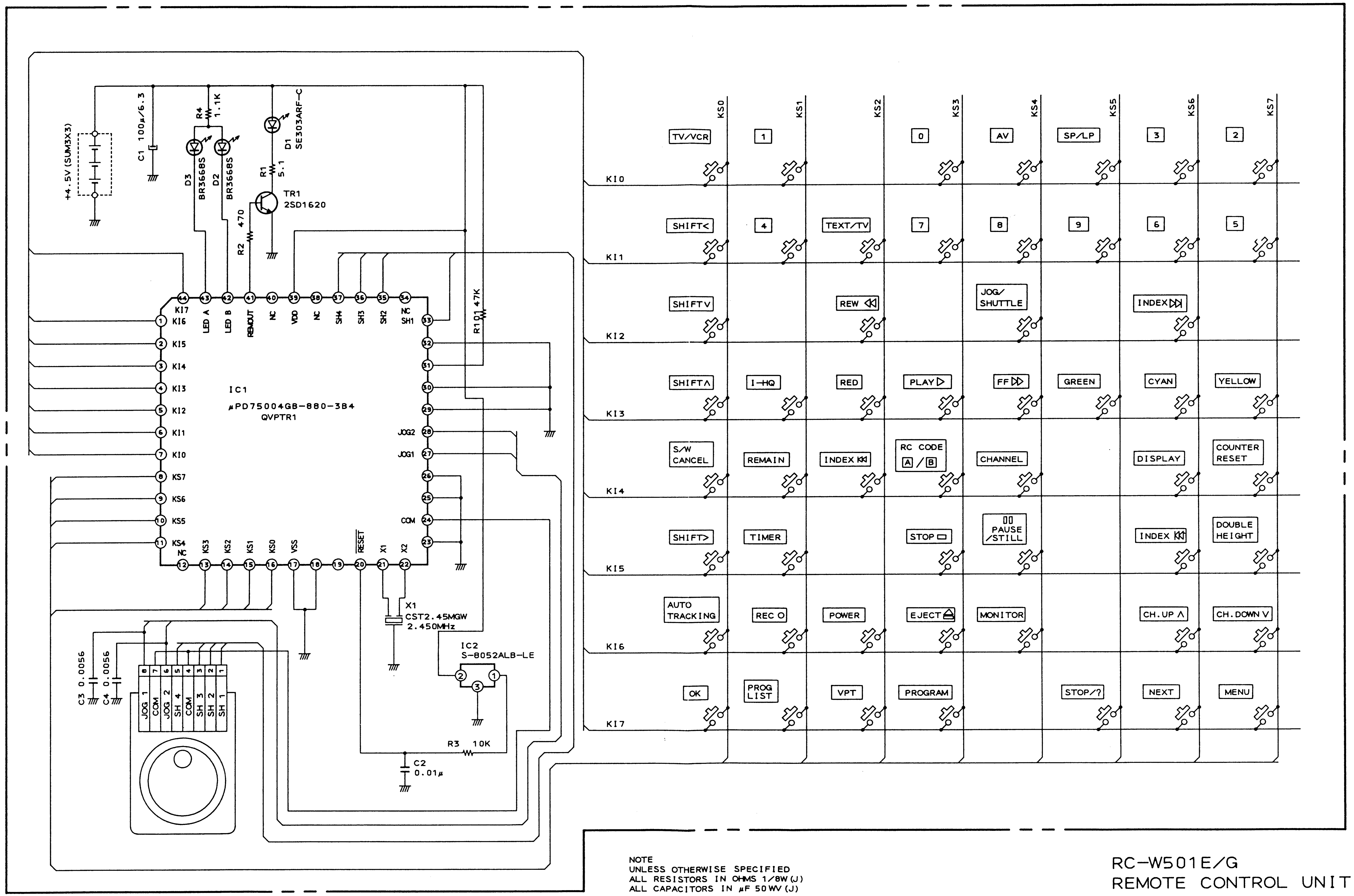
VIF UNIT 6B00870A1

INDICATED VOLTAGES WERE MEASURED
DURING E-E (STOP) MODE.
(WHEN A STATION IS TUNED)

▬ : B (POWER SUPPLY) LINE

NOTE:
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS
ALL CAPACITORS IN μF (P=PF)
ALL ELECTROLYTIC CAPACITORS IN μF/WV

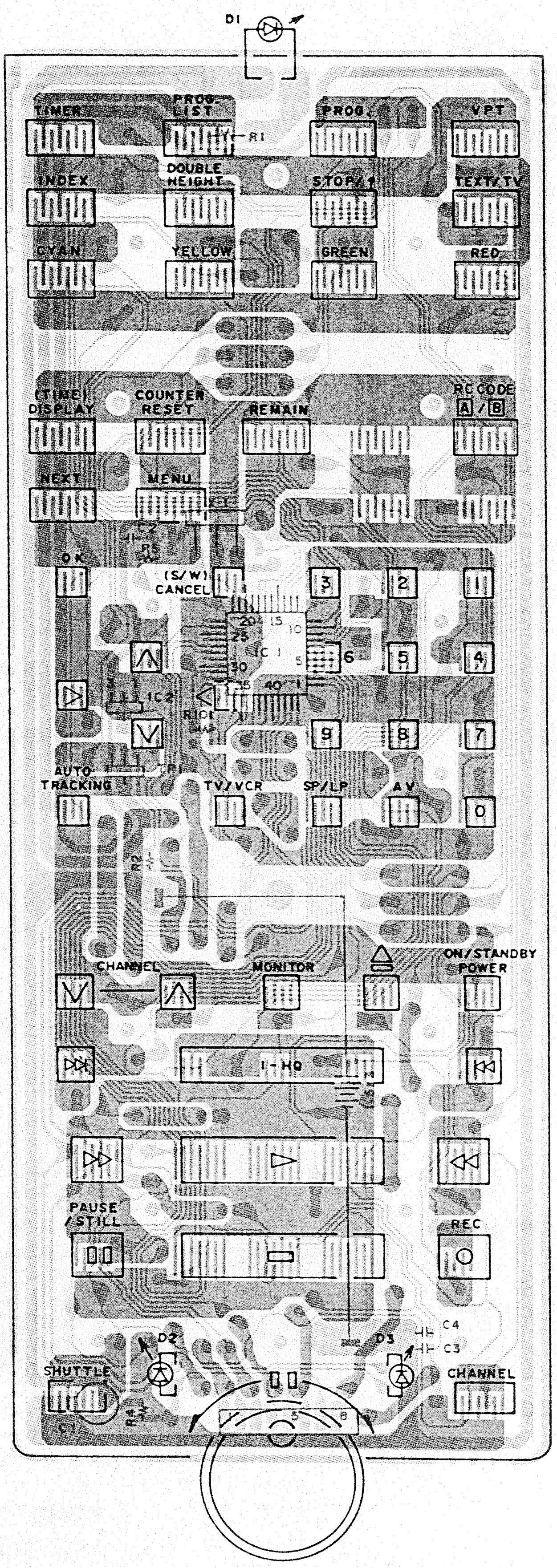
VS-G51EDG
VIF UNIT
SCHEMATIC DIAGRAM
No.18-16 V116415M
A3


+4.5V (SUM3X3)
C1 100μ/6.3
R4 1.1K
D3 BR3668S
D2 BR3668S
D1 SE303ARF-C
R1 5.1
TR1 2SD1620
R2 470
R10 47K
IC1
μPD75004GB-880-3B4
QVPTR1
KI7
KI6
KI5
KI4
KI3
KI2
KI1
KI0
KS7
KS6
KS5
KS4
NC
KS3
KS2
KS1
KS0
VSS
RESET
X1
X2
COM
JOG1
JOG2
SH1
SH2
SH3
SH4
NC
VDD
NC
REMOUT
LED B
LED A
X1
CST2.45MGW
2.450MHz
IC2
S-8052ALB-LE
R3 10K
C2 0.01μ
C3 0.0056
C4 0.0056
JOG 1
COM
JOG 2
SH 4
COM
SH 3
SH 2
SH 1
KS0
KS1
KS2
KS3
KS4
KS5
KS6
KS7
TV/VCR
1
0
AV
SP/LP
3
2
SHIFT<
4
TEXT/TV
7
8
9
6
5
SHIFTV
REW ⊲⊲
JOG/ SHUTTLE
INDEX ⊳⊳|
SHIFT∧
I-HQ
RED
PLAY ⊳
FF ⊳⊳
GREEN
CYAN
YELLOW
S/W CANCEL
REMAIN
INDEX |⊲⊲
RC CODE A / B
CHANNEL
DISPLAY
COUNTER RESET
SHIFT>
TIMER
STOP ▭
PAUSE /STILL
INDEX |⊲⊲
DOUBLE HEIGHT
AUTO TRACKING
REC O
POWER
EJECT ⏏
MONITOR
CH.UP ∧
CH.DOWN V
OK
PROG LIST
VPT
PROGRAM
STOP/?
NEXT
MENU

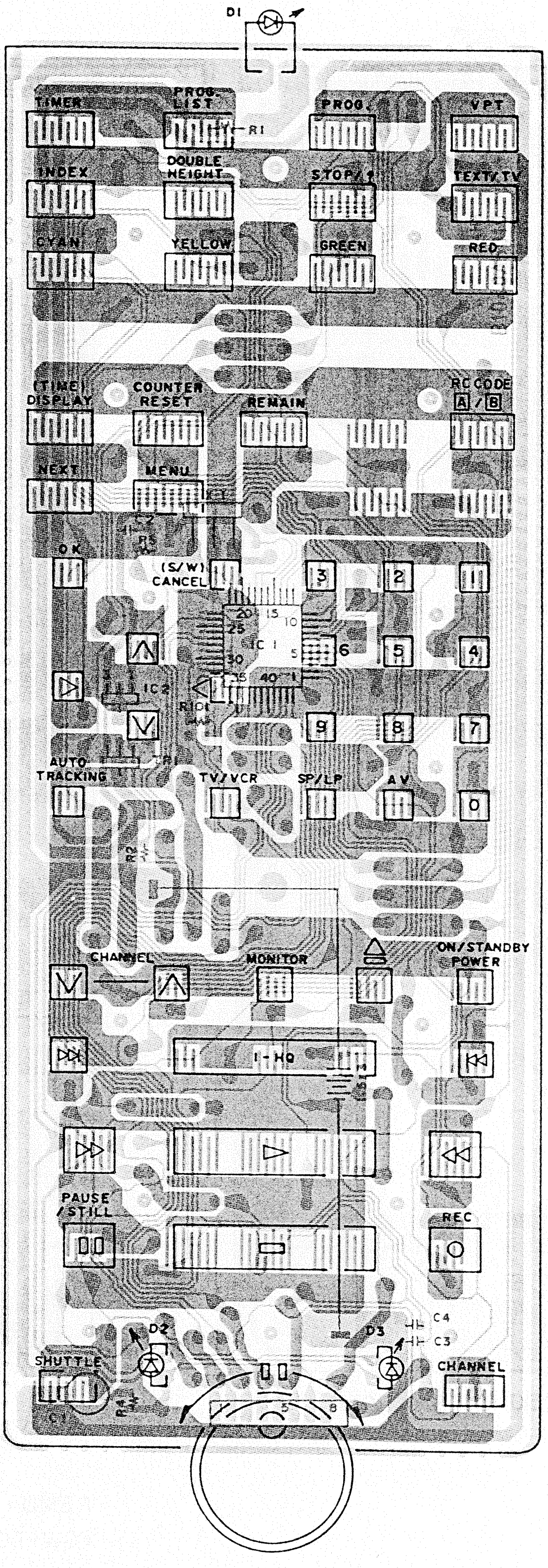
REMO-CON PCB B1040A5010

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/8W (J)
ALL CAPACITORS IN μF 50WV (J)

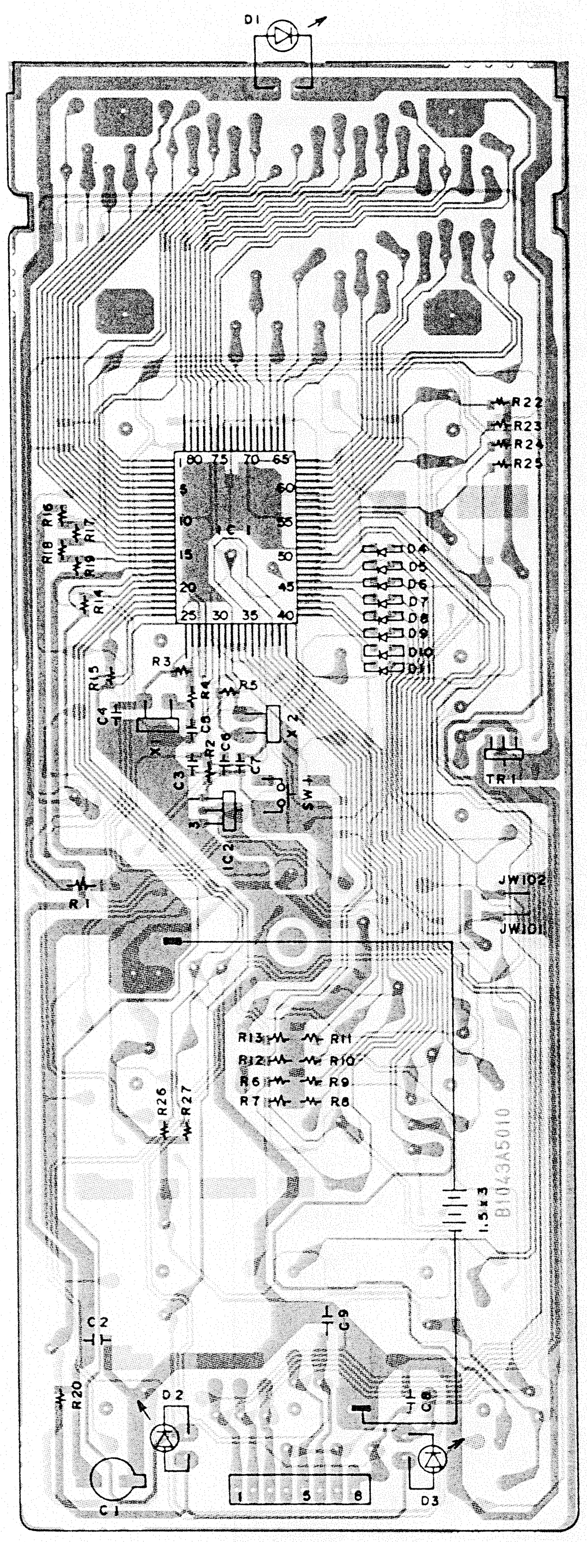
RC-W501E/G
REMOTE CONTROL UNIT
SCHEMATIC DIAGRAM
No.18-17 B106301M
A2


D1
TIMER
PROG. LIST
R1
PROG.
VPT
INDEX
DOUBLE HEIGHT
STOP/?
TEXT/TV
CYAN
YELLOW
GREEN
RED
(TIME) DISPLAY
COUNTER RESET
REMAIN
RC CODE
A / B
NEXT
MENU
C2
R5
OK
(S/W) CANCEL
3
2
1
20
15
10
25
IC1
5
30
35
40
6
5
4
IC2
R101
9
8
7
TR1
AUTO TRACKING
TV/VCR
SP/LP
AV
0
R2
CHANNEL
MONITOR
ON/STANDBY POWER
I-HQ
C5
PAUSE /STILL
REC
C4
C3
D2
D3
SHUTTLE
CHANNEL
C1
R4
1
5
8

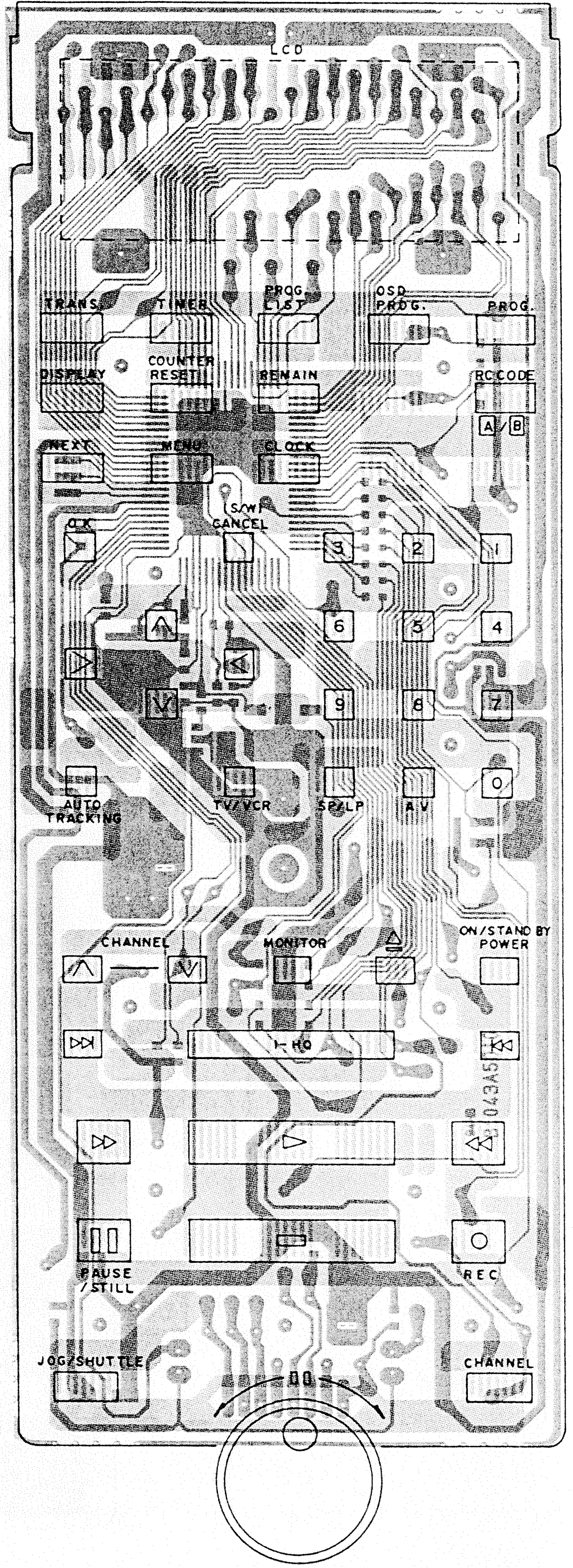
REMO-CON PCB B1040A5010(J1)


D1
TIMER
PROG. LIST
R1
PROG.
VPT
INDEX
DOUBLE HEIGHT
STOP/
TEXT/TV
CYAN
YELLOW
GREEN
RED
(TIME) DISPLAY
COUNTER RESET
REMAIN
RC CODE
A / B
NEXT
MENU
C2
R5
OK
(S/W) CANCEL
3
2
1
20
15
10
25
IC1
30
35
40
5
1
6
5
4
IC2
R10
9
8
7
R3
AUTO TRACKING
TV/VCR
SP/LP
AV
0
R2
CHANNEL
MONITOR
ON/STANDBY POWER
I-HQ
PAUSE /STILL
REC
D2
D3
C4
C3
SHUTTLE
CHANNEL
C1
R4
5
8

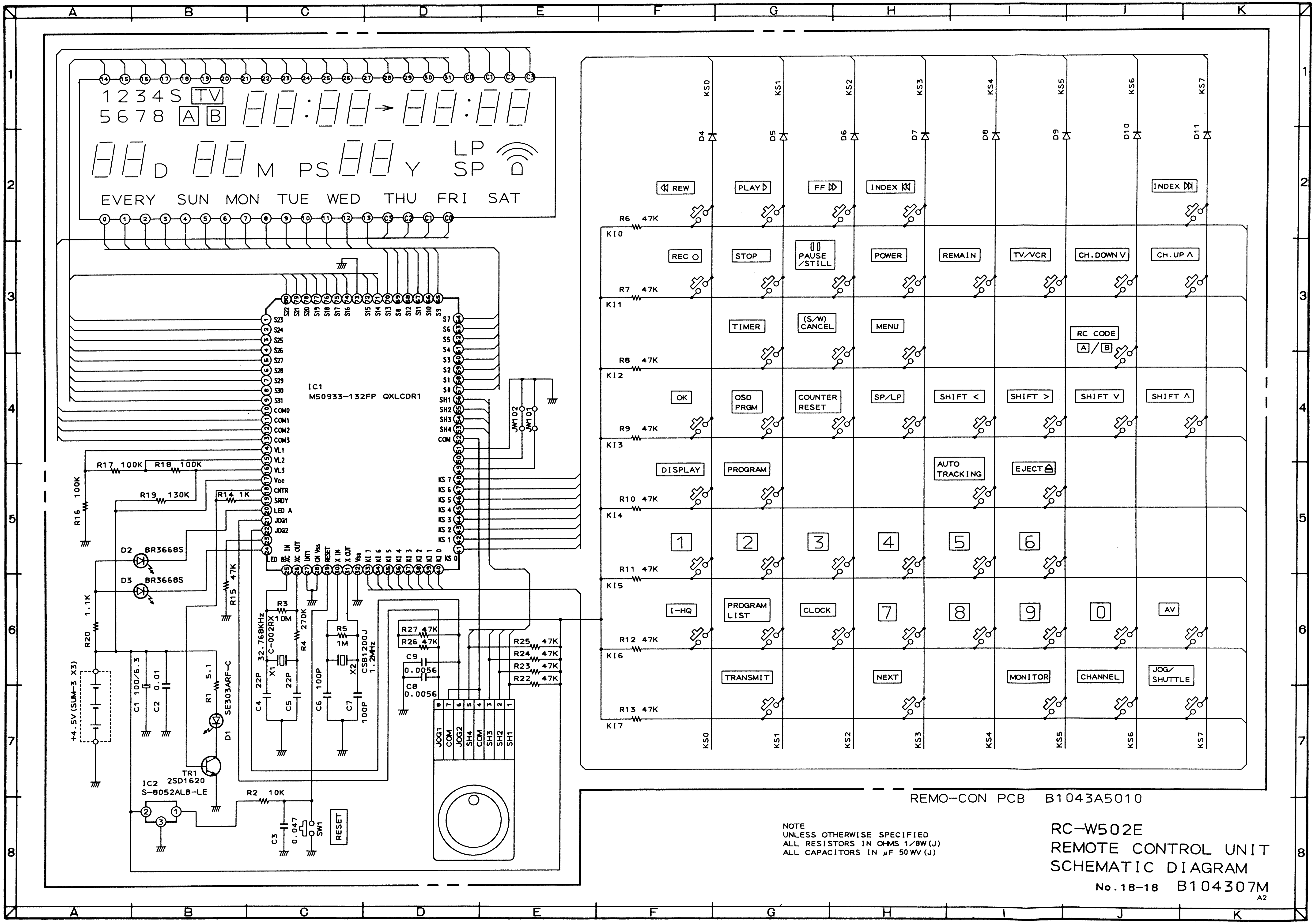
REMO-CON PCB B1040A5010(J1)


D1
R22
R23
R24
R25
1
80
75
70
65
60
55
50
45
40
35
30
25
20
15
10
5
IC1
D4
D5
D6
D7
D8
D9
D10
D11
R18
R16
R17
R19
R14
R15
R3
R4
R5
C4
X1
C5
R2
C6
C7
X2
C3
SW1
IC2
TR1
R1
JW102
JW101
R13
R11
R12
R10
R6
R9
R7
R8
R26
R27
B1043A5010
1.5×3
C2
C9
R20
D2
C8
C1
D3
1
5
8

REMO-CON PCB B1043A5010(J1)
(PARTS LOCATION)


LCD
TRANS.
TIMER
PROG. LIST
OSD PROG.
PROG.
DISPLAY
COUNTER RESET
REMAIN
RC CODE
A
B
NEXT
MENU
CLOCK
(S/W) CANCEL
O.K.
3
2
1
6
5
4
9
8
7
0
AUTO TRACKING
TV/VCR
SP/LP
A.V
CHANNEL
MONITOR
ON/STAND BY POWER
HQ
043A5
PAUSE /STILL
REC
JOG/SHUTTLE
CHANNEL

REMO-CON PCB B1043A5010(J1)
(SWITCH LOCATION)

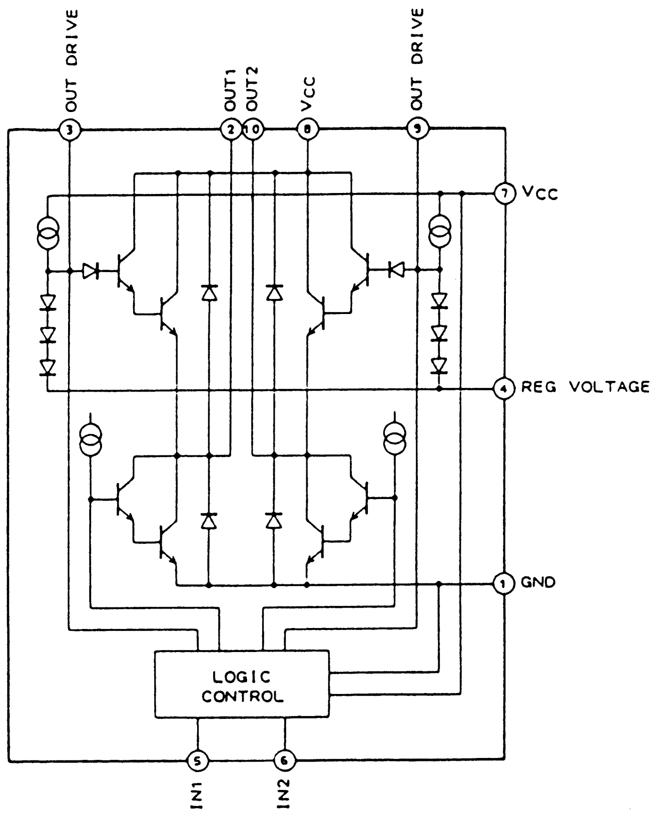

A
B
C
D
E
F
G
H
I
J
K
1
2
3
4
5
6
7
8
1234S TV
5678 A B
D M PS Y
LP SP
EVERY SUN MON TUE WED THU FRI SAT
IC1
M50933-132FP QXLCDR1
S23 S24 S25 S26 S27 S28 S29 S30 S31 COM0 COM1 COM2 COM3 VL1 VL2 VL3 Vcc CNTR SRDY LED A JOG1 JOG2
S7 S6 S5 S4 S3 S2 S1 S0 SH1 SH2 SH3 SH4 COM KS 7 KS 6 KS 5 KS 4 KS 3 KS 2 KS 1 KS 0
LED BZ X IN XC OUT INT1 CN Vss RESET X IN X OUT Vss KI 7 KI 6 KI 5 KI 4 KI 3 KI 2 KI 1 KI 0
S22 S21 S20 S19 S18 S17 S16 S15 S14 S13 S12 S11 S10 S9
JW102
JW101
R17 100K
R18 100K
R16 100K
R19 130K
R14 1K
D2 BR3668S
D3 BR3668S
R15 47K
R20 1.1K
+4.5V (SUM-3 X3)
C1 100/6.3
C2 0.01
R1 5.1
SE303ARF-C
D1
TR1 2SD1620
IC2 S-8052ALB-LE
R2 10K
C3 0.047
SW1
RESET
R3 10M
32.768KHz C-002RX
X1
R4 270K
C4 22P
C5 22P
R5 1M
X2 CSB1200J 1.2MHz
C6 100P
C7 100P
R27 47K
R26 47K
C9 0.0056
C8 0.0056
R25 47K
R24 47K
R23 47K
R22 47K
JOG1 COM JOG2 SH4 COM SH3 SH2 SH1
KS0 KS1 KS2 KS3 KS4 KS5 KS6 KS7
D4 D5 D6 D7 D8 D9 D10 D11
R6 47K KI0
R7 47K KI1
R8 47K KI2
R9 47K KI3
R10 47K KI4
R11 47K KI5
R12 47K KI6
R13 47K KI7
REW
PLAY
FF
INDEX
INDEX
REC ○
STOP
PAUSE /STILL
POWER
REMAIN
TV/VCR
CH.DOWN V
CH.UP Λ
TIMER
(S/W) CANCEL
MENU
RC CODE A/B
OK
OSD PRGM
COUNTER RESET
SP/LP
SHIFT <
SHIFT >
SHIFT V
SHIFT Λ
DISPLAY
PROGRAM
AUTO TRACKING
EJECT
1
2
3
4
5
6
I-HQ
PROGRAM LIST
CLOCK
7
8
9
0
AV
TRANSMIT
NEXT
MONITOR
CHANNEL
JOG/ SHUTTLE

REMO-CON PCB B1043A5010

NOTE
UNLESS OTHERWISE SPECIFIED
ALL RESISTORS IN OHMS 1/8W (J)
ALL CAPACITORS IN µF 50WV (J)

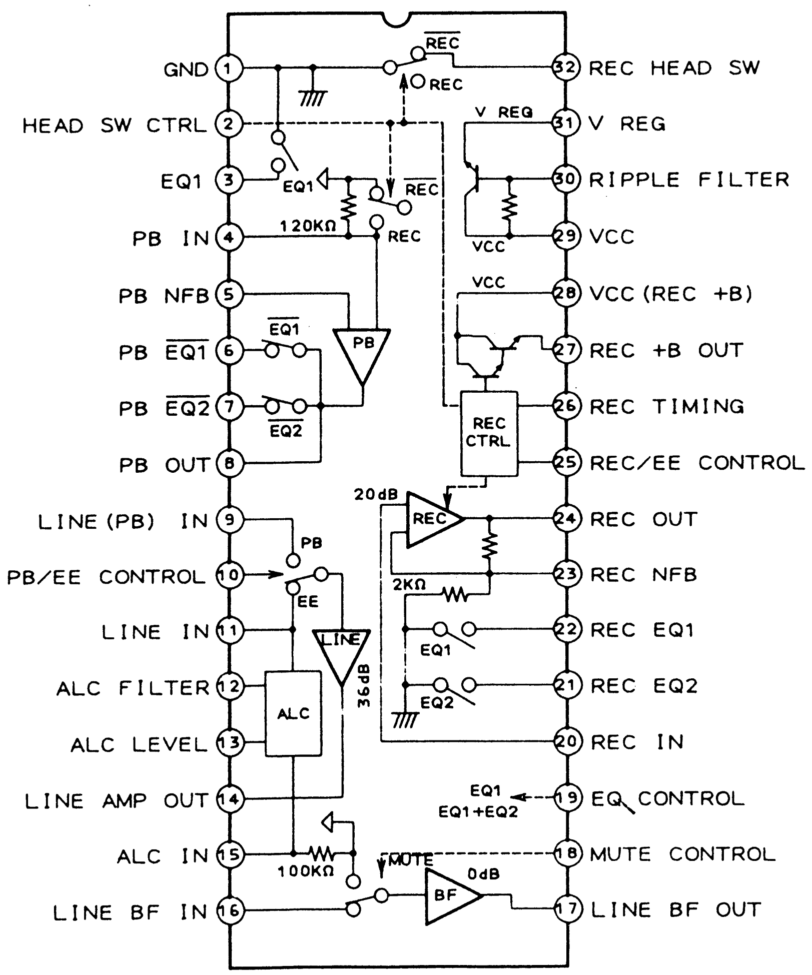
RC-W502E
REMOTE CONTROL UNIT
SCHEMATIC DIAGRAM
No.18-18 B104307M
A2

BA6229 (BI-DIRECTIONAL MOTOR DRIVE)


OUT DRIVE
OUT1
OUT2
VCC
OUT DRIVE
3
2
10
8
9
7 VCC
4 REG VOLTAGE
1 GND
LOGIC CONTROL
5
6
IN1
IN2

INPUT		OUTPUT		MODE
⑤	⑥	②	⑩	
H	H	L	L	BRAKE
L	H	L	H	CASSETTE & TAPE LOADING
H	L	H	L	CASSETTE & TAPE UNLOADING
L	L	OPEN	OPEN	STOP

BA7765AS (AUDIO SIGNAL REC/PB AMPLIFIER)


GND 1
HEAD SW CTRL 2
EQ1 3
PB IN 4
PB NFB 5
PB EQ1 6
PB EQ2 7
PB OUT 8
LINE (PB) IN 9
PB/EE CONTROL 10
LINE IN 11
ALC FILTER 12
ALC LEVEL 13
LINE AMP OUT 14
ALC IN 15
LINE BF IN 16
32 REC HEAD SW
31 V REG
30 RIPPLE FILTER
29 VCC
28 VCC (REC +B)
27 REC +B OUT
26 REC TIMING
25 REC/EE CONTROL
24 REC OUT
23 REC NFB
22 REC EQ1
21 REC EQ2
20 REC IN
19 EQ CONTROL
18 MUTE CONTROL
17 LINE BF OUT
REC
REC
V REG
EQ1
REC
120kΩ
REC
VCC
VCC
PB
EQ1
EQ2
REC CTRL
20dB
REC
PB
2kΩ
EE
LINE
36dB
EQ1
EQ2
ALC
EQ1
EQ1+EQ2
100kΩ
MUTE
0dB
BF

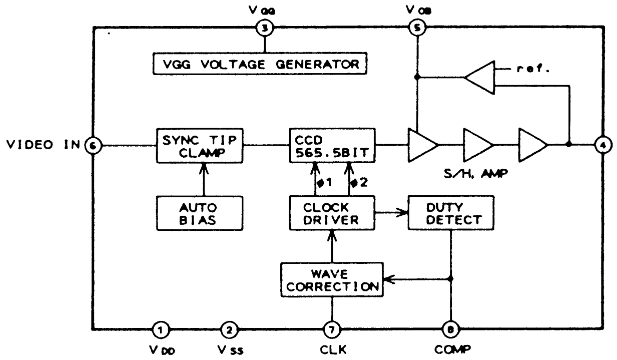
CF72307 (TELETEXT DECODER)

PIN No.	PORT NAME	I/O	FUNCTION
1	FIELD	O	Programmable output polarity of a 25 Hz output signal synchronized either with CSYNC or SLVHVSYNC input field sync pulses to produce a non-interlaced display.
2	DCSYNC	O	Digital composite sync output.
3	CSYNCIN	I	Active low composite sync.
4	TACW	I	Teletext aquisition window.
5	TUM	I	Test pin. (Must be grounded in normal application.)
6	OSCOUT	O	13.875 MHz crystal oscillator output.
7	OSCIN	I	13.875 MHz crystal oscillator input. (OSCIN must be grounded if the 13.875 MHz clock of the dataslicer is connected to CLKIN.)
8	DVCC1	I	Power supply for digital logic. (5 V ± 5 %)
9	CLKIN	I	13.875 MHz system clock input for digital logic.
10	DGND2	–	Ground terminal for digital logic.
11	TDATA	I	Teletext data from dataslicer.
12	TCLOCK	I	Teletext clock from dataslicer.
13	DGND1	–	Ground terminal for digital logic.
14	AVCC1	I	Power supply for analogue logic. (5 V ± 5 %)
15	BLANK	O	Picture blanking signal (active high).
16	BLUE	O	Blue output (active high).
17	AGND1	–	Ground terminal for analogue logic.
18	GREEN	O	Green output (active high).
19	AGND2	–	Ground terminal for analogue logic.
20	RED	O	Red output (active high).
21	AGND3	–	Ground terminal for analogue logic.
22	RGBSET	I/O	A current, determind by a resistor defines the output high level on the RGB pins.
23	REF	I/O	Reference voltage output for the RGB output drivers.
24	AVCC2	I	Power supply for analogue logic. (5 V ± 5 %)
25	VIDEOIN	I	Composite video signal input.
26	ACSYNC	O	Analogue output of sync switch.
27	TEST	I	Test pin. (Must be grounded in normal application.)
28	BIAS	I	Bias definition pin. (BIAS should be grounded if the on chip oscillator is not used.)
29	$\overline{\text{RESET}}$	I	Power on reset signal input (active low).
30	TRC	I	Test pin. (Must be grounded in normal application.)
31	TGST		
32	TGMT		
33	SLVHSYNC	I	Programmable active low or high H-sync input. (In slave sync mode, it locks the horizontal display timing to this signal.)
34	SLVHVSYNC	I	Programmable active low or high V-sync input. (In slave sync mode, it locks the vertical display timing to this signal.)
35	PWRDWN	I	Power down the IC in test mode.(Should be grounded in normal application.)
36	SDA	I/O	I^2C-bus serial data.
37	SCL	I/O	I^2C-bus serial data clock.
38	C1	I	Test pin. (Must be connected to +5 V in normal application.)
39	CO	I	
50	A0	O	DRAM row and column address.
46	A1		
43	A2		
41	A3		
40	A4		
42	A5		
45	A6		
48	A7		
51	A8		
54	A9		
44	DVCC2	I	Power supply for digital logic. (5 V ± 5 %)
47	DGND3	–	Ground terminal for digital logic.
49	DGND4	–	
52	VDD32	O	Output terminal of the 3.2 V power supply.
53	DVCC3	I	Power supply for digital logic. (5 V ± 5 %)
55	$\overline{\text{G}}$	O	DRAM output (active low).
56	$\overline{\text{RAS0}}$	O	DRAM row address strobe output.
57	$\overline{\text{CAS0}}$	O	DRAM column address strobe output.
58	$\overline{\text{W}}$	O	DRAM write command (active low).
62	D0	I/O	DRAM data.
60	D1		
59	D2		
61	D3		
63	$\overline{\text{RAS1}}$	O	DRAM row address strobe for memory bank zero.
64	$\overline{\text{CAS1}}$	O	DRAM column address strobe for memory bank one.

CF72306 (TELETEXT DATA SLICER)

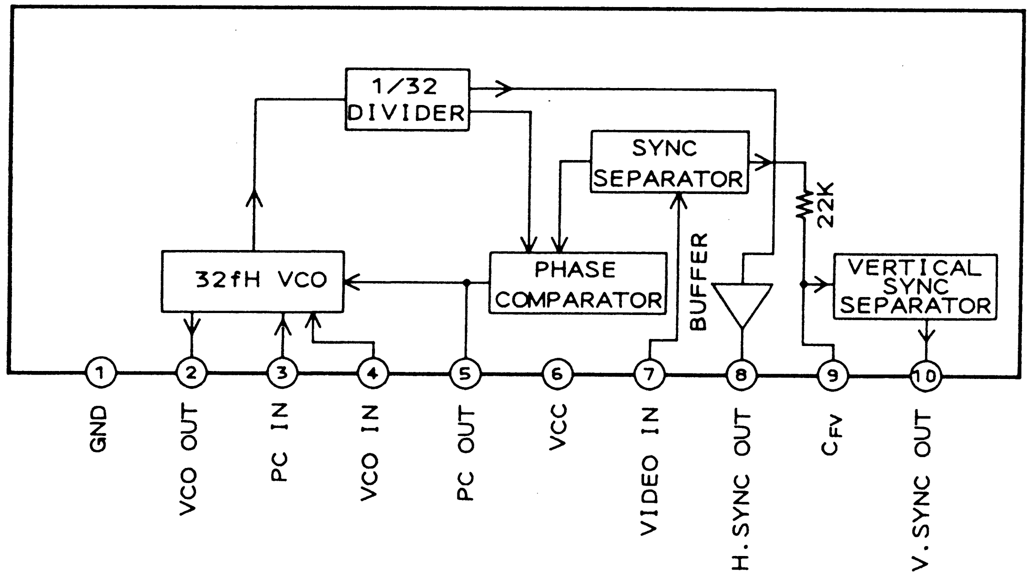
PIN No.	PORT NAME	I/O	FUNCTION
1	TSIG	I	Video sync input 1
2	SSIG	I	Video sync input 2
3	CSIG	I	Video data input
4	AGND1	–	Analogue ground
5	OSC1	I	13.875 MHz oscillator
6	OSC2	I	13.875 MHz oscillator
7	AVCC	–	Analogue Vcc
8	CREF	I	Video data reference input
9	AGND2	–	Analogue ground
10	BIAS	I	Internal reference
11	TSTAPLB	I	Test/Application
12	TCLK	O	Teletext clock
13	TDATA	O	Teletext data
14	DGND2	–	Digital ground
15	OSCOUT	O	Oscillator output
16	DVCC	–	Digital Vcc
17	WIND	I	Timing signal
18	DGND1	–	Digital ground
19	SYNC	O	Separated sync output
20	SCANOUT	O	Test scan output

LC8992 (CCD 1H DELAY LINE)



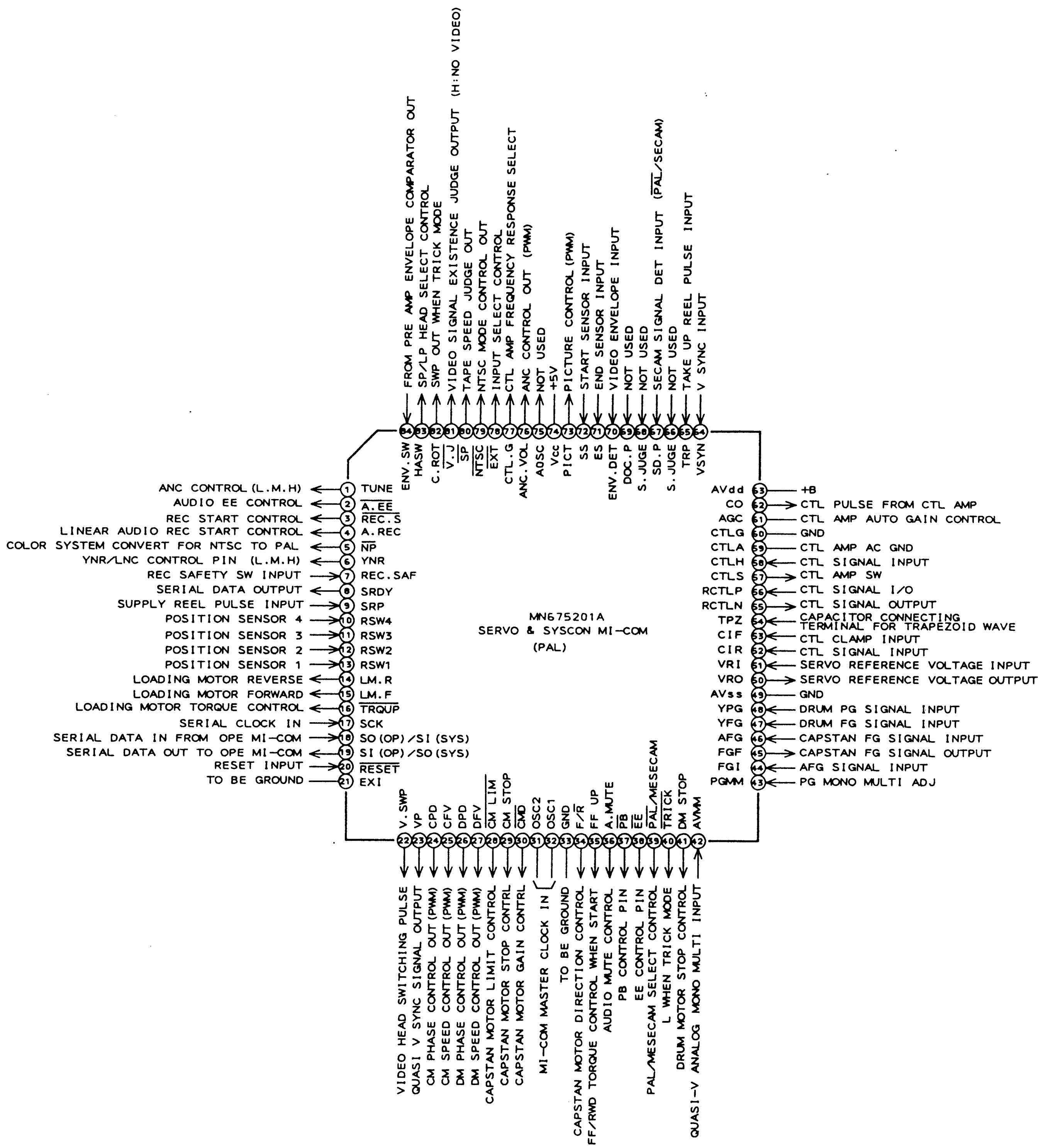
V GG
V DD
③
⑤
VGG VOLTAGE GENERATOR
ref.
VIDEO IN ⑥
SYNC TIP CLAMP
CCD 565.5BIT
φ1
φ2
S/H. AMP
④ VIDEO OUT
AUTO BIAS
CLOCK DRIVER
DUTY DETECT
WAVE CORRECTION
①
②
⑦
⑧
V DD
V SS
CLK
COMP

MM1068XS (SYNC SEPARATOR)



1/32 DIVIDER
SYNC SEPARATOR
22K
32fH VCO
PHASE COMPARATOR
BUFFER
VERTICAL SYNC SEPARATOR
①
②
③
④
⑤
⑥
⑦
⑧
⑨
⑩
GND
VCO OUT
PC IN
VCO IN
PC OUT
VCC
VIDEO IN
H.SYNC OUT
C FV
V.SYNC OUT

MN675201A (SERVO/SYSCON MI-COM)

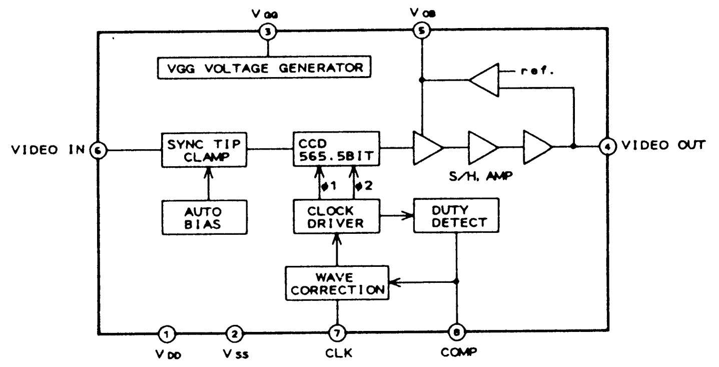


MN675201A
SERVO & SYSCON MI-COM
(PAL)
ANC CONTROL (L.M.H) ① TUNE
AUDIO EE CONTROL ② A.EE
REC START CONTROL ③ REC.S
LINEAR AUDIO REC START CONTROL ④ A.REC
COLOR SYSTEM CONVERT FOR NTSC TO PAL ⑤ NP
YNR/LNC CONTROL PIN (L.M.H) ⑥ YNR
REC SAFETY SW INPUT ⑦ REC.SAF
SERIAL DATA OUTPUT ⑧ SRDY
SUPPLY REEL PULSE INPUT ⑨ SRP
POSITION SENSOR 4 ⑩ RSW4
POSITION SENSOR 3 ⑪ RSW3
POSITION SENSOR 2 ⑫ RSW2
POSITION SENSOR 1 ⑬ RSW1
LOADING MOTOR REVERSE ⑭ LM.R
LOADING MOTOR FORWARD ⑮ LM.F
LOADING MOTOR TORQUE CONTROL ⑯ TRQUP
SERIAL CLOCK IN ⑰ SCK
SERIAL DATA IN FROM OPE MI-COM ⑱ SO (OP)/SI (SYS)
SERIAL DATA OUT TO OPE MI-COM ⑲ SI (OP)/SO (SYS)
RESET INPUT ⑳ RESET
TO BE GROUND ㉑ EXI
V.SWP ㉒ VIDEO HEAD SWITCHING PULSE
VP ㉓ QUASI V SYNC SIGNAL OUTPUT
CPD ㉔ CM PHASE CONTROL OUT (PWM)
CFV ㉕ CM SPEED CONTROL OUT (PWM)
DPD ㉖ DM PHASE CONTROL OUT (PWM)
DFV ㉗ DM SPEED CONTROL OUT (PWM)
CM LIM ㉘ CAPSTAN MOTOR LIMIT CONTROL
CM STOP ㉙ CAPSTAN MOTOR STOP CONTRL
CMD ㉚ CAPSTAN MOTOR GAIN CONTRL
OSC2 ㉛
OSC1 ㉜ MI-COM MASTER CLOCK IN
GND ㉝ TO BE GROUND
F/R ㉞ CAPSTAN MOTOR DIRECTION CONTROL
FF UP ㉟ FF/RWD TORQUE CONTROL WHEN START
A.MUTE ㊱ AUDIO MUTE CONTROL
PB ㊲ PB CONTROL PIN
EE ㊳ EE CONTROL PIN
PAL/MESECAM ㊴ PAL/MESECAM SELECT CONTROL
TRICK ㊵ L WHEN TRICK MODE
DM STOP ㊶ DRUM MOTOR STOP CONTROL
AVMM ㊷ QUASI-V ANALOG MONO MULTI INPUT
PGMM ㊸ PG MONO MULTI ADJ
FGI ㊹ AFG SIGNAL INPUT
FGF ㊺ CAPSTAN FG SIGNAL OUTPUT
AFG ㊻ CAPSTAN FG SIGNAL INPUT
YFG ㊼ DRUM FG SIGNAL INPUT
YPG ㊽ DRUM PG SIGNAL INPUT
AVss ㊾ GND
VRO ㊿ SERVO REFERENCE VOLTAGE OUTPUT
VRI (51) SERVO REFERENCE VOLTAGE INPUT
CIR (52) CTL SIGNAL INPUT
CIF (53) CTL CLAMP INPUT
TPZ (54) CAPACITOR CONNECTING TERMINAL FOR TRAPEZOID WAVE
RCTLN (55) CTL SIGNAL OUTPUT
RCTLP (56) CTL SIGNAL I/O
CTLS (57) CTL AMP SW
CTLH (58) CTL SIGNAL INPUT
CTLA (59) CTL AMP AC GND
CTLG (60) GND
AGC (61) CTL AMP AUTO GAIN CONTROL
CO (62) CTL PULSE FROM CTL AMP
AVdd (63) +B
VSYN (64) V SYNC INPUT
TRP (65) TAKE UP REEL PULSE INPUT
S.JUGE (66) NOT USED
SD.P (67) SECAM SIGNAL DET INPUT (PAL/SECAM)
S.JUGE (68) NOT USED
DOC.P (69) NOT USED
ENV.DET (70) VIDEO ENVELOPE INPUT
ES (71) END SENSOR INPUT
SS (72) START SENSOR INPUT
PICT (73) PICTURE CONTROL (PWM)
Vcc (74) +5V
AOSC (75) NOT USED
ANC.VOL (76) ANC CONTROL OUT (PWM)
CTL.G (77) CTL AMP FREQUENCY RESPONSE SELECT
EXT (78) INPUT SELECT CONTROL
NTSC (79) NTSC MODE CONTROL OUT
SP (80) TAPE SPEED JUDGE OUT
V.J (81) VIDEO SIGNAL EXISTENCE JUDGE OUTPUT (H:NO VIDEO)
C.ROT (82) SW OUT WHEN TRICK MODE
HASW (83) SP/LP HEAD SELECT CONTROL
ENV.SW (84) FROM PRE AMP ENVELOPE COMPARATOR OUT

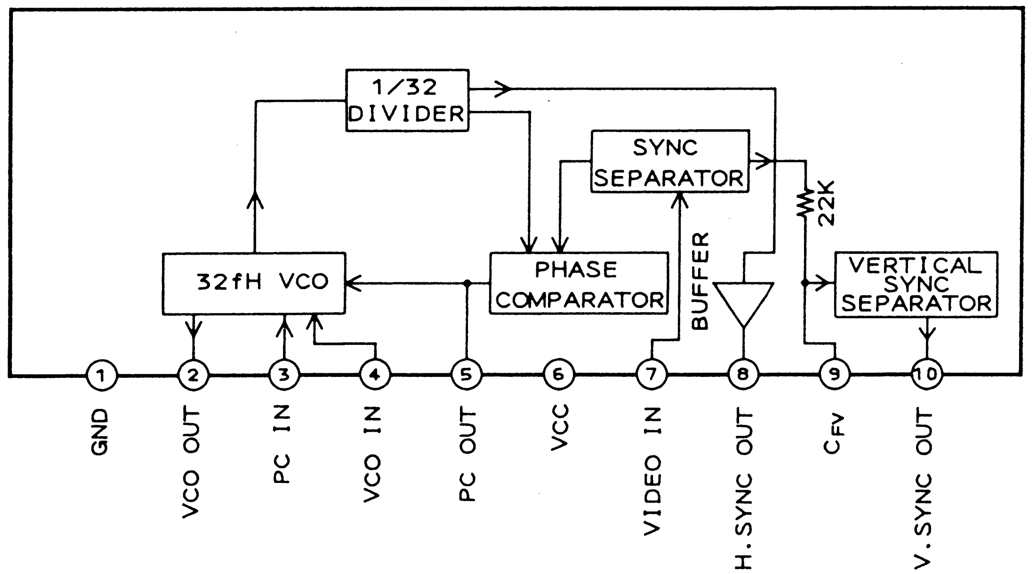
CF72306 (TELETEXT DATA SLICER)

PIN No.	PORT NAME	I/O	FUNCTION
1	TSIG	I	Video sync input 1
2	SSIG	I	Video sync input 2
3	CSIG	I	Video data input
4	AGND1	–	Analogue ground
5	OSC1	I	13.875 MHz oscillator
6	OSC2	I	13.875 MHz oscillator
7	AVCC	–	Analogue Vcc
8	CREF	I	Video data reference input
9	AGND2	–	Analogue ground
10	BIAS	I	Internal reference
11	TSTAPLB	I	Test/Application
12	TCLK	O	Teletext clock
13	TDATA	O	Teletext data
14	DGND2	–	Digital ground
15	OSCOUT	O	Oscillator output
16	DVCC	–	Digital Vcc
17	WIND	I	Timing signal
18	DGND1	–	Digital ground
19	SYNC	O	Separated sync output
20	SCANOUT	O	Test scan output

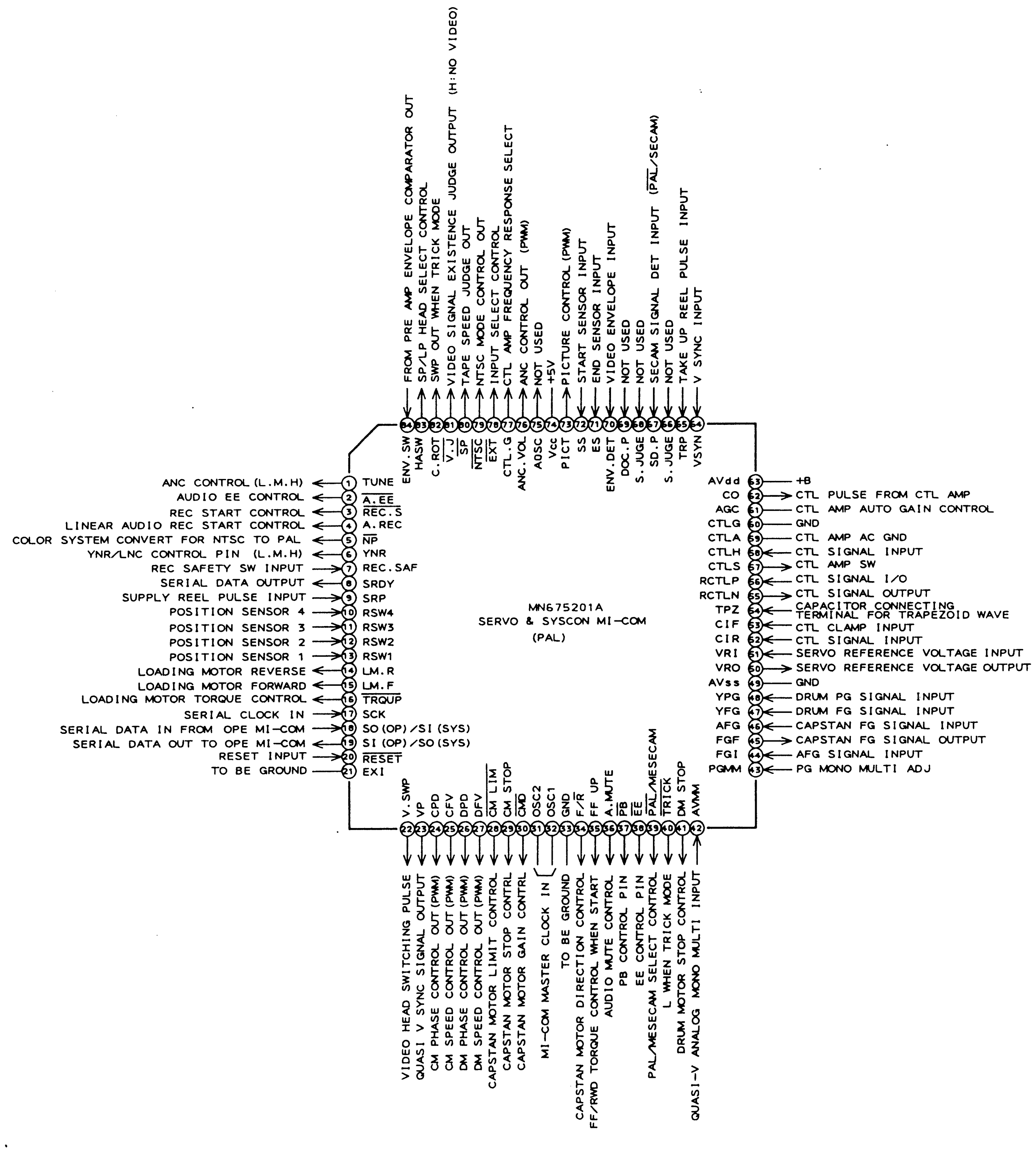
LC8992 (CCD 1H DELAY LINE)


V GG
V OB
VGG VOLTAGE GENERATOR
ref.
VIDEO IN
SYNC TIP CLAMP
CCD 565.5BIT
VIDEO OUT
S/H, AMP
ϕ1
ϕ2
AUTO BIAS
CLOCK DRIVER
DUTY DETECT
WAVE CORRECTION
V DD
V SS
CLK
COMP
1
2
3
4
5
6
7
8

MM1068XS (SYNC SEPARATOR)


1/32 DIVIDER
SYNC SEPARATOR
22K
32fH VCO
PHASE COMPARATOR
BUFFER
VERTICAL SYNC SEPARATOR
1
2
3
4
5
6
7
8
9
10
GND
VCO OUT
PC IN
VCO IN
PC OUT
VCC
VIDEO IN
H.SYNC OUT
C FV
V.SYNC OUT

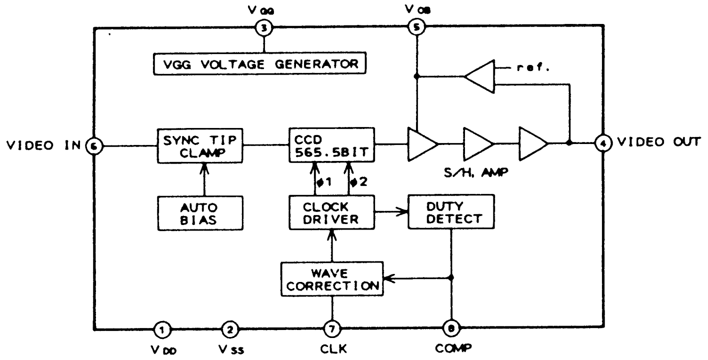
MN675201A (SERVO/SYSCON MI-COM)


MN675201A
SERVO & SYSCON MI-COM
(PAL)
ANC CONTROL (L.M.H) ① TUNE
AUDIO EE CONTROL ② A.EE
REC START CONTROL ③ REC.S
LINEAR AUDIO REC START CONTROL ④ A.REC
COLOR SYSTEM CONVERT FOR NTSC TO PAL ⑤ NP
YNR/LNC CONTROL PIN (L.M.H) ⑥ YNR
REC SAFETY SW INPUT ⑦ REC.SAF
SERIAL DATA OUTPUT ⑧ SRDY
SUPPLY REEL PULSE INPUT ⑨ SRP
POSITION SENSOR 4 ⑩ RSW4
POSITION SENSOR 3 ⑪ RSW3
POSITION SENSOR 2 ⑫ RSW2
POSITION SENSOR 1 ⑬ RSW1
LOADING MOTOR REVERSE ⑭ LM.R
LOADING MOTOR FORWARD ⑮ LM.F
LOADING MOTOR TORQUE CONTROL ⑯ TRQUP
SERIAL CLOCK IN ⑰ SCK
SERIAL DATA IN FROM OPE MI-COM ⑱ SO (OP) /SI (SYS)
SERIAL DATA OUT TO OPE MI-COM ⑲ SI (OP) /SO (SYS)
RESET INPUT ⑳ RESET
TO BE GROUND ㉑ EXI
VIDEO HEAD SWITCHING PULSE ㉒ V.SWP
QUASI V SYNC SIGNAL OUTPUT ㉓ VP
CM PHASE CONTROL OUT (PWM) ㉔ CPD
CM SPEED CONTROL OUT (PWM) ㉕ CFV
DM PHASE CONTROL OUT (PWM) ㉖ DPD
DM SPEED CONTROL OUT (PWM) ㉗ DFV
CAPSTAN MOTOR LIMIT CONTROL ㉘ CM LIM
CAPSTAN MOTOR STOP CONTRL ㉙ CM STOP
CAPSTAN MOTOR GAIN CONTRL ㉚ CMD
MI-COM MASTER CLOCK IN ㉛ OSC2
㉜ OSC1
TO BE GROUND ㉝ GND
CAPSTAN MOTOR DIRECTION CONTROL ㉞ F/R
FF/RWD TORQUE CONTROL WHEN START ㉟ FF UP
AUDIO MUTE CONTROL ㊱ A.MUTE
PB CONTROL PIN ㊲ PB
EE CONTROL PIN ㊳ EE
PAL/MESECAM SELECT CONTROL ㊴ PAL/MESECAM
L WHEN TRICK MODE ㊵ TRICK
DRUM MOTOR STOP CONTROL ㊶ DM STOP
QUASI-V ANALOG MONO MULTI INPUT ㊷ AVMM
PGMM ㊸ PG MONO MULTI ADJ
FGI ㊹ AFG SIGNAL INPUT
FGF ㊺ CAPSTAN FG SIGNAL OUTPUT
AFG ㊻ CAPSTAN FG SIGNAL INPUT
YFG ㊼ DRUM FG SIGNAL INPUT
YPG ㊽ DRUM PG SIGNAL INPUT
AVss ㊾ GND
VRO ㊿ SERVO REFERENCE VOLTAGE OUTPUT
VRI (51) SERVO REFERENCE VOLTAGE INPUT
CIR (52) CTL SIGNAL INPUT
CIF (53) CTL CLAMP INPUT
TPZ (54) CAPACITOR CONNECTING TERMINAL FOR TRAPEZOID WAVE
RCTLN (55) CTL SIGNAL OUTPUT
RCTLP (56) CTL SIGNAL I/O
CTLS (57) CTL AMP SW
CTLH (58) CTL SIGNAL INPUT
CTLA (59) CTL AMP AC GND
CTLG (60) GND
AGC (61) CTL AMP AUTO GAIN CONTROL
CO (62) CTL PULSE FROM CTL AMP
AVdd (63) +B
VSYN (64) V SYNC INPUT
TRP (65) TAKE UP REEL PULSE INPUT
S.JUGE (66) NOT USED
SD.P (67) SECAM SIGNAL DET INPUT (PAL/SECAM)
S.JUGE (68) NOT USED
DOC.P (69) NOT USED
ENV.DET (70) VIDEO ENVELOPE INPUT
ES (71) END SENSOR INPUT
SS (72) START SENSOR INPUT
PICT (73) PICTURE CONTROL (PWM)
Vcc (74) +5V
AOSC (75) NOT USED
ANC.VOL (76) ANC CONTROL OUT (PWM)
CTL.G (77) CTL AMP FREQUENCY RESPONSE SELECT
EXT (78) INPUT SELECT CONTROL
NTSC (79) NTSC MODE CONTROL OUT
SP (80) TAPE SPEED JUDGE OUT
V.J (81) VIDEO SIGNAL EXISTENCE JUDGE OUTPUT (H:NO VIDEO)
C.ROT (82) SWP OUT WHEN TRICK MODE
HASW (83) SP/LP HEAD SELECT CONTROL
ENV.SW (84) FROM PRE AMP ENVELOPE COMPARATOR OUT

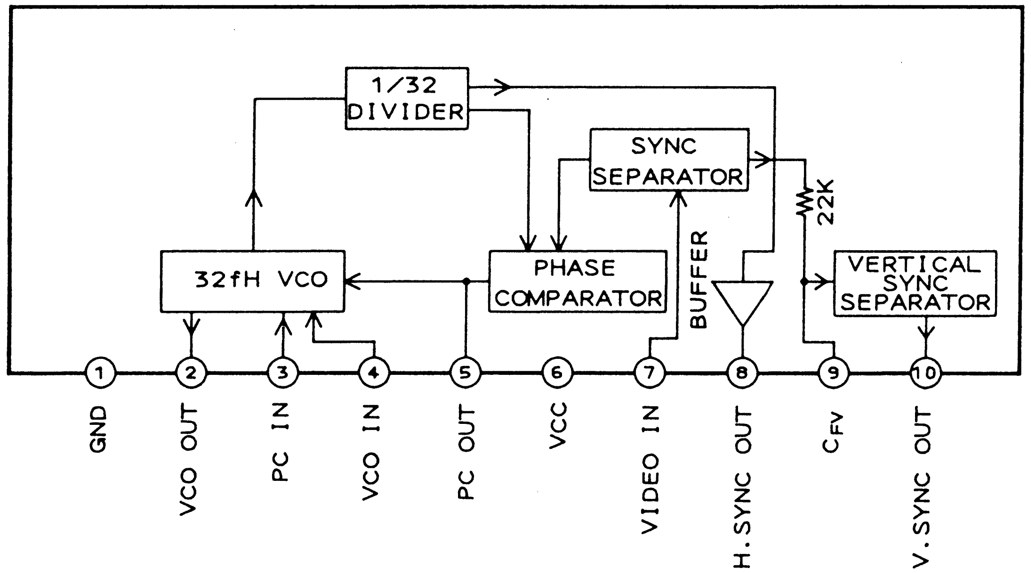
CF72306 (TELETEXT DATA SLICER)

PIN No.	PORT NAME	I/O	FUNCTION
1	TSIG	I	Video sync input 1
2	SSIG	I	Video sync input 2
3	CSIG	I	Video data input
4	AGND1	–	Analogue ground
5	OSC1	I	13.875 MHz oscillator
6	OSC2	I	13.875 MHz oscillator
7	AVCC	–	Analogue Vcc
8	CREF	I	Video data reference input
9	AGND2	–	Analogue ground
10	BIAS	I	Internal reference
11	TSTAPLB	I	Test/Application
12	TCLK	O	Teletext clock
13	TDATA	O	Teletext data
14	DGND2	–	Digital ground
15	OSCOUT	O	Oscillator output
16	DVCC	–	Digital Vcc
17	WIND	I	Timing signal
18	DGND1	–	Digital ground
19	SYNC	O	Separated sync output
20	SCANOUT	O	Test scan output

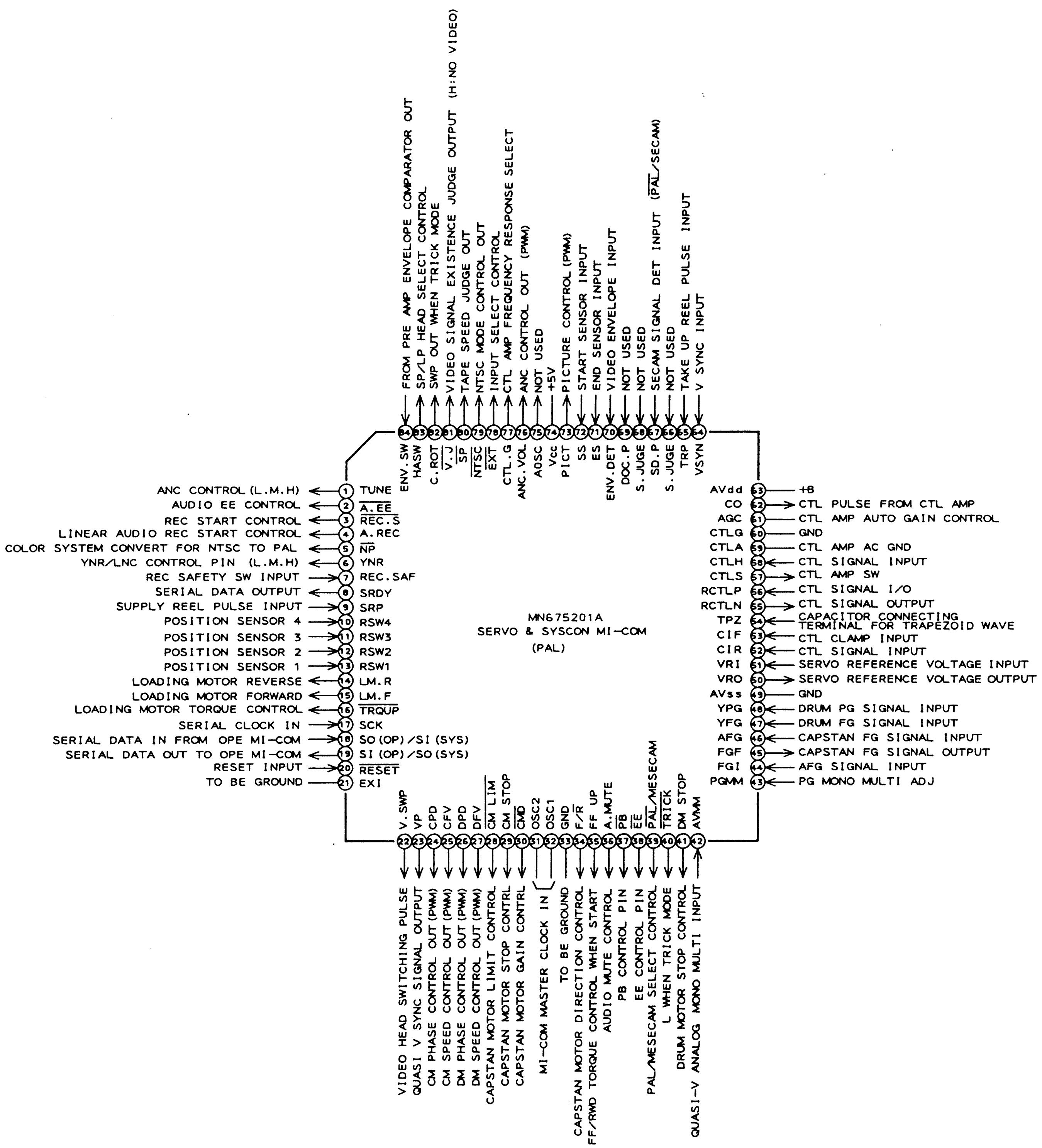
LC8992 (CCD 1H DELAY LINE)


V GG
V OB
VGG VOLTAGE GENERATOR
ref.
VIDEO IN 6
SYNC TIP CLAMP
CCD 565.5BIT
S/H, AMP
4 VIDEO OUT
AUTO BIAS
ϕ1
ϕ2
CLOCK DRIVER
DUTY DETECT
WAVE CORRECTION
1 V DD
2 V SS
7 CLK
8 COMP
3
5

MM1068XS (SYNC SEPARATOR)


1/32 DIVIDER
SYNC SEPARATOR
22K
32fH VCO
PHASE COMPARATOR
BUFFER
VERTICAL SYNC SEPARATOR
1 GND
2 VCO OUT
3 PC IN
4 VCO IN
5 PC OUT
6 VCC
7 VIDEO IN
8 H.SYNC OUT
9 CFV
10 V.SYNC OUT

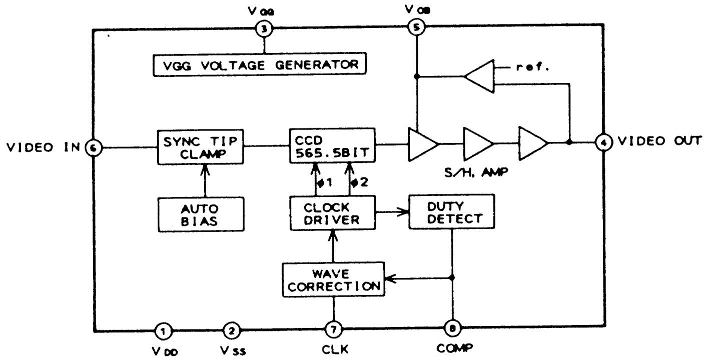
MN675201A (SERVO/SYSCON MI-COM)


MN675201A
SERVO & SYSCON MI-COM
(PAL)
ANC CONTROL (L.M.H) 1 TUNE
AUDIO EE CONTROL 2 A.EE
REC START CONTROL 3 REC.S
LINEAR AUDIO REC START CONTROL 4 A.REC
COLOR SYSTEM CONVERT FOR NTSC TO PAL 5 NP
YNR/LNC CONTROL PIN (L.M.H) 6 YNR
REC SAFETY SW INPUT 7 REC.SAF
SERIAL DATA OUTPUT 8 SRDY
SUPPLY REEL PULSE INPUT 9 SRP
POSITION SENSOR 4 10 RSW4
POSITION SENSOR 3 11 RSW3
POSITION SENSOR 2 12 RSW2
POSITION SENSOR 1 13 RSW1
LOADING MOTOR REVERSE 14 LM.R
LOADING MOTOR FORWARD 15 LM.F
LOADING MOTOR TORQUE CONTROL 16 TRQUP
SERIAL CLOCK IN 17 SCK
SERIAL DATA IN FROM OPE MI-COM 18 SO (OP)/SI (SYS)
SERIAL DATA OUT TO OPE MI-COM 19 SI (OP)/SO (SYS)
RESET INPUT 20 RESET
TO BE GROUND 21 EXI
22 V.SWP VIDEO HEAD SWITCHING PULSE
23 VP QUASI V SYNC SIGNAL OUTPUT
24 CPD CM PHASE CONTROL OUT (PWM)
25 CFV CM SPEED CONTROL OUT (PWM)
26 DPD DM PHASE CONTROL OUT (PWM)
27 DFV DM SPEED CONTROL OUT (PWM)
28 CM LIM CAPSTAN MOTOR LIMIT CONTROL
29 CM STOP CAPSTAN MOTOR STOP CONTRL
30 CMD CAPSTAN MOTOR GAIN CONTRL
31 OSC2
32 OSC1
MI-COM MASTER CLOCK IN
33 GND TO BE GROUND
34 F/R CAPSTAN MOTOR DIRECTION CONTROL
35 FF UP FF/RWD TORQUE CONTROL WHEN START
36 A.MUTE AUDIO MUTE CONTROL
37 PB PB CONTROL PIN
38 EE EE CONTROL PIN
39 PAL/MESECAM PAL/MESECAM SELECT CONTROL
40 TRICK L WHEN TRICK MODE
41 DM STOP DRUM MOTOR STOP CONTROL
42 AVMM QUASI-V ANALOG MONO MULTI INPUT
PGMM 43 PG MONO MULTI ADJ
FGI 44 AFG SIGNAL INPUT
FGF 45 CAPSTAN FG SIGNAL OUTPUT
AFG 46 CAPSTAN FG SIGNAL INPUT
YFG 47 DRUM FG SIGNAL INPUT
YPG 48 DRUM PG SIGNAL INPUT
AVss 49 GND
VRO 50 SERVO REFERENCE VOLTAGE OUTPUT
VRI 51 SERVO REFERENCE VOLTAGE INPUT
CIR 52 CTL SIGNAL INPUT
CIF 53 CTL CLAMP INPUT
TPZ 54 CAPACITOR CONNECTING TERMINAL FOR TRAPEZOID WAVE
RCTLN 55 CTL SIGNAL OUTPUT
RCTLP 56 CTL SIGNAL I/O
CTLS 57 CTL AMP SW
CTLH 58 CTL SIGNAL INPUT
CTLA 59 CTL AMP AC GND
CTLG 60 GND
AGC 61 CTL AMP AUTO GAIN CONTROL
CO 62 CTL PULSE FROM CTL AMP
AVdd 63 +B
64 VSYN V SYNC INPUT
65 TRP TAKE UP REEL PULSE INPUT
66 S.JUGE NOT USED
67 SD.P SECAM SIGNAL DET INPUT (PAL/SECAM)
68 S.JUGE NOT USED
69 DOC.P NOT USED
70 ENV.DET VIDEO ENVELOPE INPUT
71 ES END SENSOR INPUT
72 SS START SENSOR INPUT
73 PICT PICTURE CONTROL (PWM)
74 Vcc +5V
75 AOSC NOT USED
76 ANC.VOL ANC CONTROL OUT (PWM)
77 CTL.G CTL AMP FREQUENCY RESPONSE SELECT
78 EXT INPUT SELECT CONTROL
79 NTSC NTSC MODE CONTROL OUT
80 SP TAPE SPEED JUDGE OUT
81 V.J VIDEO SIGNAL EXISTENCE JUDGE OUTPUT (H:NO VIDEO)
82 C.ROT SWP OUT WHEN TRICK MODE
83 HASW SP/LP HEAD SELECT CONTROL
84 ENV.SW FROM PRE AMP ENVELOPE COMPARATOR OUT

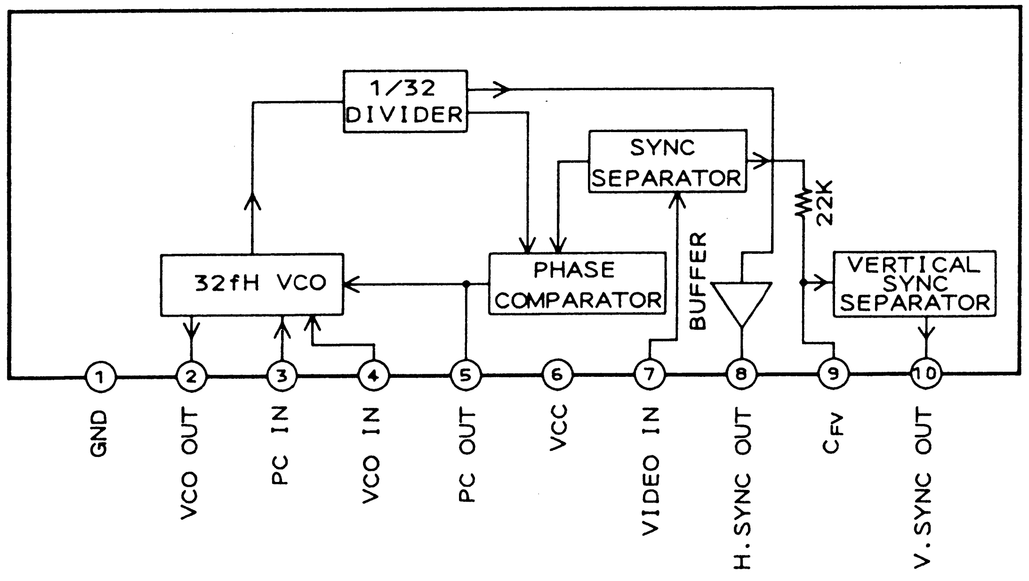
CF72306 (TELETEXT DATA SLICER)

PIN No.	PORT NAME	I/O	FUNCTION
1	TSIG	I	Video sync input 1
2	SSIG	I	Video sync input 2
3	CSIG	I	Video data input
4	AGND1	–	Analogue ground
5	OSC1	I	13.875 MHz oscillator
6	OSC2	I	13.875 MHz oscillator
7	AVCC	–	Analogue Vcc
8	CREF	I	Video data reference input
9	AGND2	–	Analogue ground
10	BIAS	I	Internal reference
11	TSTAPLB	I	Test/Application
12	TCLK	O	Teletext clock
13	TDATA	O	Teletext data
14	DGND2	–	Digital ground
15	OSCOUT	O	Oscillator output
16	DVCC	–	Digital Vcc
17	WIND	I	Timing signal
18	DGND1	–	Digital ground
19	SYNC	O	Separated sync output
20	SCANOUT	O	Test scan output

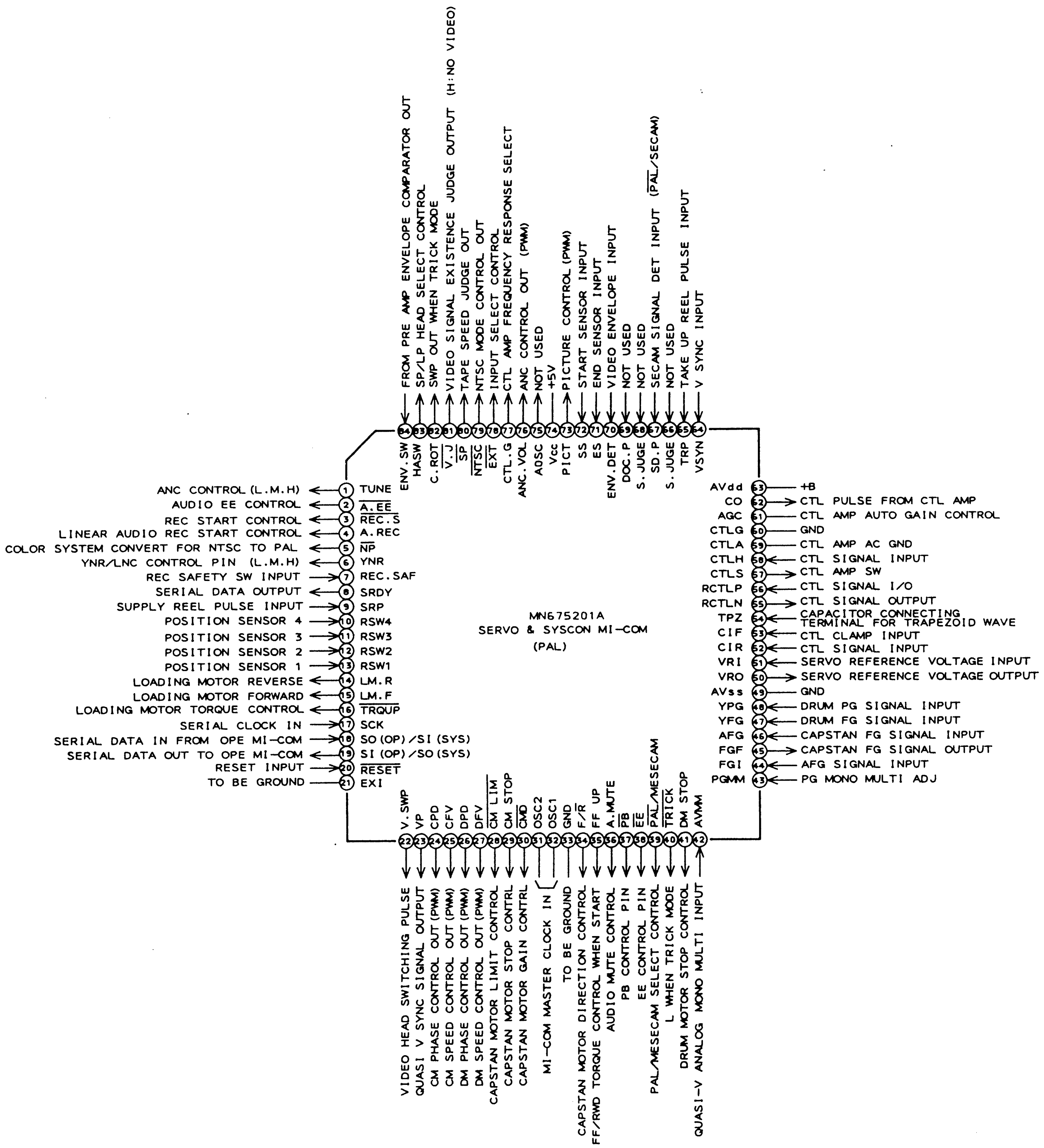
LC8992 (CCD 1H DELAY LINE)


VGG
VBB
VGG VOLTAGE GENERATOR
ref.
VIDEO IN
SYNC TIP CLAMP
CCD 565.5BIT
S/H, AMP
VIDEO OUT
AUTO BIAS
ϕ1
ϕ2
CLOCK DRIVER
DUTY DETECT
WAVE CORRECTION
VDD
VSS
CLK
COMP
1
2
3
4
5
6
7
8

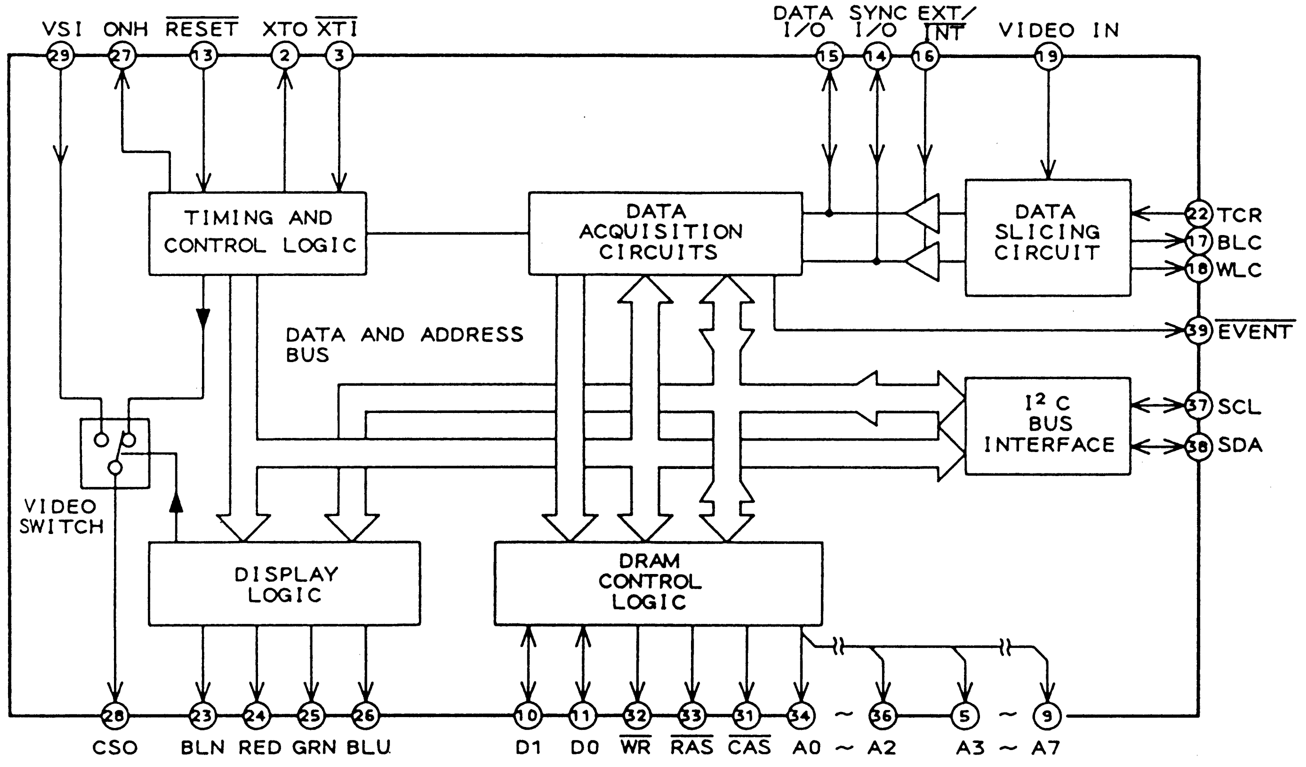
MM1068XS (SYNC SEPARATOR)


1/32 DIVIDER
SYNC SEPARATOR
22K
32fH VCO
PHASE COMPARATOR
BUFFER
VERTICAL SYNC SEPARATOR
1
2
3
4
5
6
7
8
9
10
GND
VCO OUT
PC IN
VCO IN
PC OUT
VCC
VIDEO IN
H.SYNC OUT
CFV
V.SYNC OUT

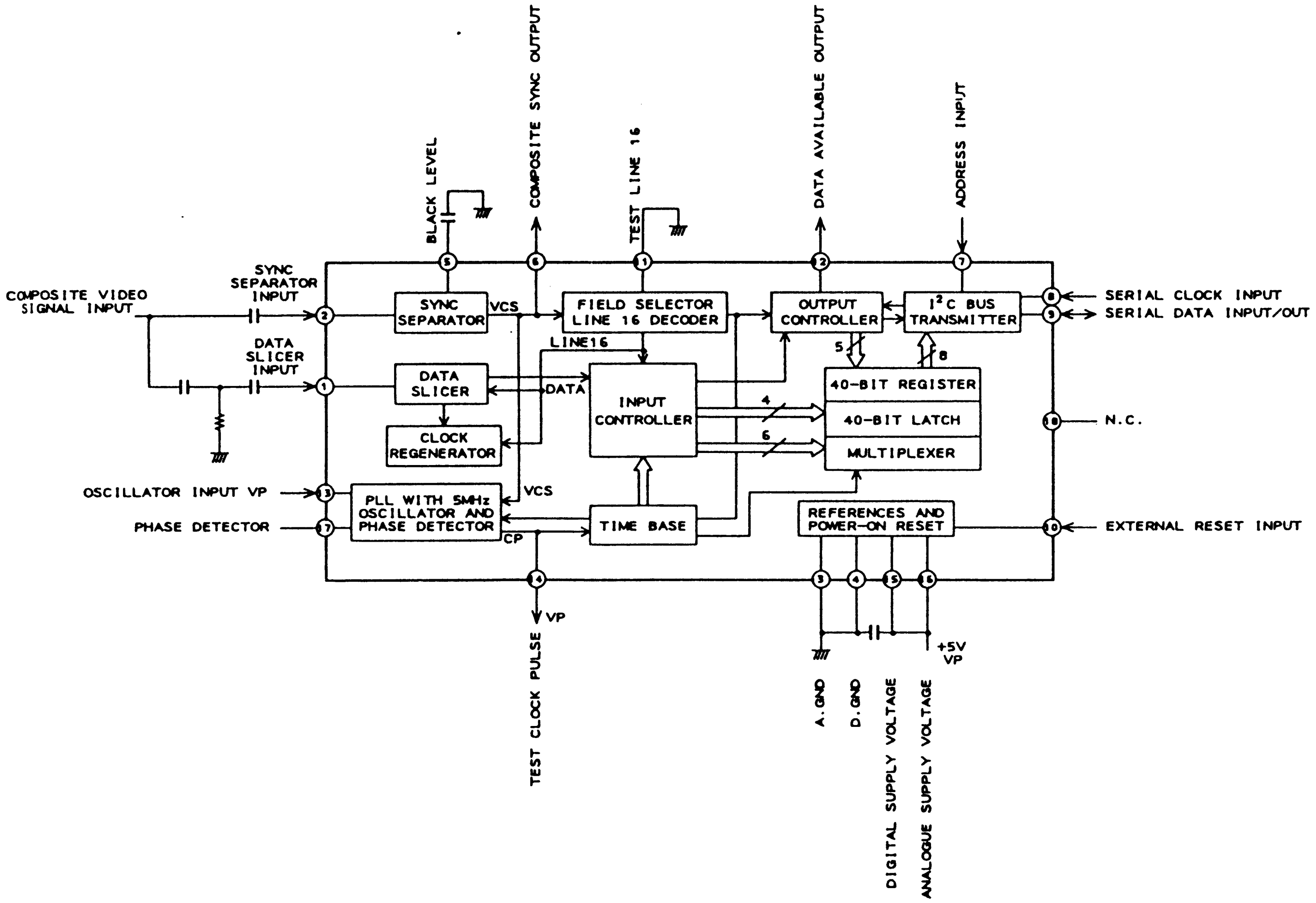
MN675201A (SERVO/SYSCON MI-COM)


MN675201A
SERVO & SYSCON MI-COM
(PAL)
ANC CONTROL (L.M.H) ← 1 TUNE
AUDIO EE CONTROL ← 2 A.EE
REC START CONTROL ← 3 REC.S
LINEAR AUDIO REC START CONTROL ← 4 A.REC
COLOR SYSTEM CONVERT FOR NTSC TO PAL ← 5 NP
YNR/LNC CONTROL PIN (L.M.H) ← 6 YNR
REC SAFETY SW INPUT → 7 REC.SAF
SERIAL DATA OUTPUT ← 8 SRDY
SUPPLY REEL PULSE INPUT → 9 SRP
POSITION SENSOR 4 → 10 RSW4
POSITION SENSOR 3 → 11 RSW3
POSITION SENSOR 2 → 12 RSW2
POSITION SENSOR 1 → 13 RSW1
LOADING MOTOR REVERSE ← 14 LM.R
LOADING MOTOR FORWARD ← 15 LM.F
LOADING MOTOR TORQUE CONTROL ← 16 TRQUP
SERIAL CLOCK IN → 17 SCK
SERIAL DATA IN FROM OPE MI-COM → 18 SO (OP)/SI (SYS)
SERIAL DATA OUT TO OPE MI-COM ← 19 SI (OP)/SO (SYS)
RESET INPUT → 20 RESET
TO BE GROUND — 21 EXI
22 V.SWP → VIDEO HEAD SWITCHING PULSE
23 VP → QUASI V SYNC SIGNAL OUTPUT
24 CPD → CM PHASE CONTROL OUT (PWM)
25 CFV → CM SPEED CONTROL OUT (PWM)
26 DPD → DM PHASE CONTROL OUT (PWM)
27 DFV → DM SPEED CONTROL OUT (PWM)
28 CM LIM → CAPSTAN MOTOR LIMIT CONTROL
29 CM STOP → CAPSTAN MOTOR STOP CONTRL
30 CMD → CAPSTAN MOTOR GAIN CONTRL
31 OSC2, 32 OSC1 — MI-COM MASTER CLOCK IN
33 GND — TO BE GROUND
34 F/R → CAPSTAN MOTOR DIRECTION CONTROL
35 FF UP → FF/RWD TORQUE CONTROL WHEN START
36 A.MUTE → AUDIO MUTE CONTROL
37 PB → PB CONTROL PIN
38 EE → EE CONTROL PIN
39 PAL/MESECAM → PAL/MESECAM SELECT CONTROL
40 TRICK → L WHEN TRICK MODE
41 DM STOP → DRUM MOTOR STOP CONTROL
42 AVMM ← QUASI-V ANALOG MONO MULTI INPUT
PGMM 43 ← PG MONO MULTI ADJ
FGI 44 ← AFG SIGNAL INPUT
FGF 45 → CAPSTAN FG SIGNAL OUTPUT
AFG 46 ← CAPSTAN FG SIGNAL INPUT
YFG 47 ← DRUM FG SIGNAL INPUT
YPG 48 ← DRUM PG SIGNAL INPUT
AVss 49 — GND
VRO 50 → SERVO REFERENCE VOLTAGE OUTPUT
VRI 51 ← SERVO REFERENCE VOLTAGE INPUT
CIR 52 ← CTL SIGNAL INPUT
CIF 53 ← CTL CLAMP INPUT
TPZ 54 ← CAPACITOR CONNECTING TERMINAL FOR TRAPEZOID WAVE
RCTLN 55 → CTL SIGNAL OUTPUT
RCTLP 56 ← CTL SIGNAL I/O
CTLS 57 → CTL AMP SW
CTLH 58 ← CTL SIGNAL INPUT
CTLA 59 — CTL AMP AC GND
CTLG 60 — GND
AGC 61 — CTL AMP AUTO GAIN CONTROL
CO 62 → CTL PULSE FROM CTL AMP
AVdd 63 — +B
64 VSYN ← V SYNC INPUT
65 TRP ← TAKE UP REEL PULSE INPUT
66 S.JUGE ← NOT USED
67 SD.P ← SECAM SIGNAL DET INPUT (PAL/SECAM)
68 S.JUGE ← NOT USED
69 DOC.P ← NOT USED
70 ENV.DET ← VIDEO ENVELOPE INPUT
71 ES ← END SENSOR INPUT
72 SS ← START SENSOR INPUT
73 PICT → PICTURE CONTROL (PWM)
74 Vcc — +5V
75 AOSC → NOT USED
76 ANC.VOL → ANC CONTROL OUT (PWM)
77 CTL.G → CTL AMP FREQUENCY RESPONSE SELECT
78 EXT → INPUT SELECT CONTROL
79 NTSC → NTSC MODE CONTROL OUT
80 SP → TAPE SPEED JUDGE OUT
81 V.J → VIDEO SIGNAL EXISTENCE JUDGE OUTPUT (H:NO VIDEO)
82 C.ROT → SWP OUT WHEN TRICK MODE
83 HASW → SP/LP HEAD SELECT CONTROL
84 ENV.SW ← FROM PRE AMP ENVELOPE COMPARATOR OUT

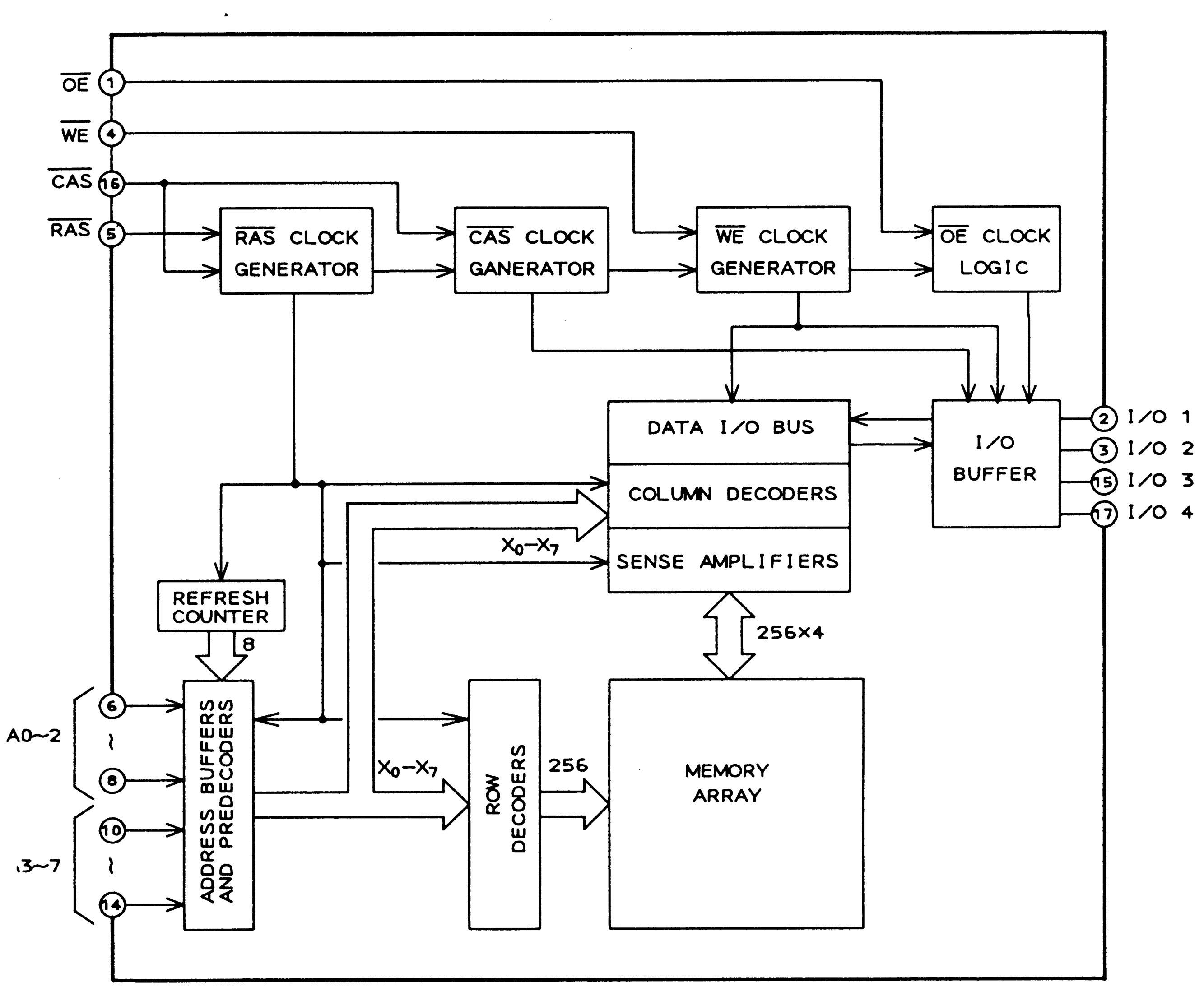
MV1815 (TELETEXT DECODER FOR 625 LINE OPERATION)


VSI
ONH
RESET
XTO
XTI
DATA I/O
SYNC I/O
EXT/INT
VIDEO IN
29
27
13
2
3
15
14
16
19
TIMING AND CONTROL LOGIC
DATA ACQUISITION CIRCUITS
DATA SLICING CIRCUIT
22 TCR
17 BLC
18 WLC
39 EVENT
DATA AND ADDRESS BUS
I²C BUS INTERFACE
37 SCL
38 SDA
VIDEO SWITCH
DISPLAY LOGIC
DRAM CONTROL LOGIC
28
23
24
25
26
10
11
32
33
31
34
36
5
9
CSO
BLN
RED
GRN
BLU
D1
D0
WR
RAS
CAS
A0 ~ A2
A3 ~ A7

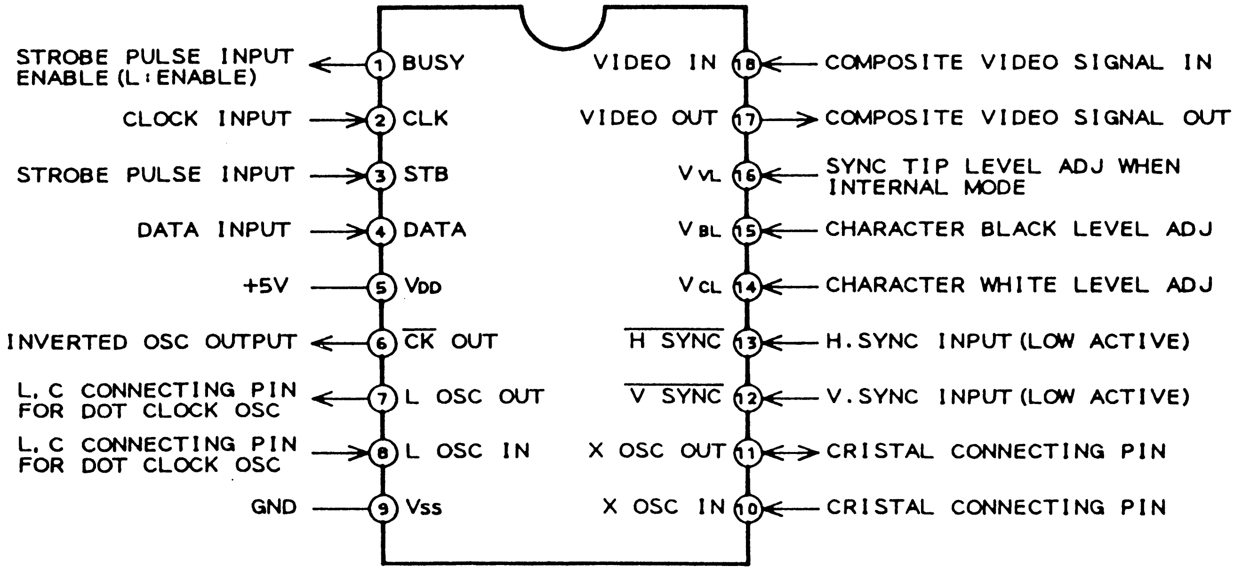
SAA4700 (VPS DATA LINE PROCESSOR)


BLACK LEVEL
COMPOSITE SYNC OUTPUT
TEST LINE 16
DATA AVAILABLE OUTPUT
ADDRESS INPUT
5
6
11
12
7
COMPOSITE VIDEO SIGNAL INPUT
SYNC SEPARATOR INPUT
DATA SLICER INPUT
2
1
SYNC SEPARATOR
VCS
FIELD SELECTOR LINE 16 DECODER
OUTPUT CONTROLLER
I²C BUS TRANSMITTER
8
9
SERIAL CLOCK INPUT
SERIAL DATA INPUT/OUT
LINE16
DATA SLICER
DATA
INPUT CONTROLLER
5
8
40-BIT REGISTER
40-BIT LATCH
MULTIPLEXER
4
6
CLOCK REGENERATOR
18
N.C.
OSCILLATOR INPUT VP
PHASE DETECTOR
13
17
PLL WITH 5MHz OSCILLATOR AND PHASE DETECTOR
VCS
CP
TIME BASE
REFERENCES AND POWER-ON RESET
10
EXTERNAL RESET INPUT
14
VP
TEST CLOCK PULSE
3
4
15
16
+5V VP
A.GND
D.GND
DIGITAL SUPPLY VOLTAGE
ANALOGUE SUPPLY VOLTAGE

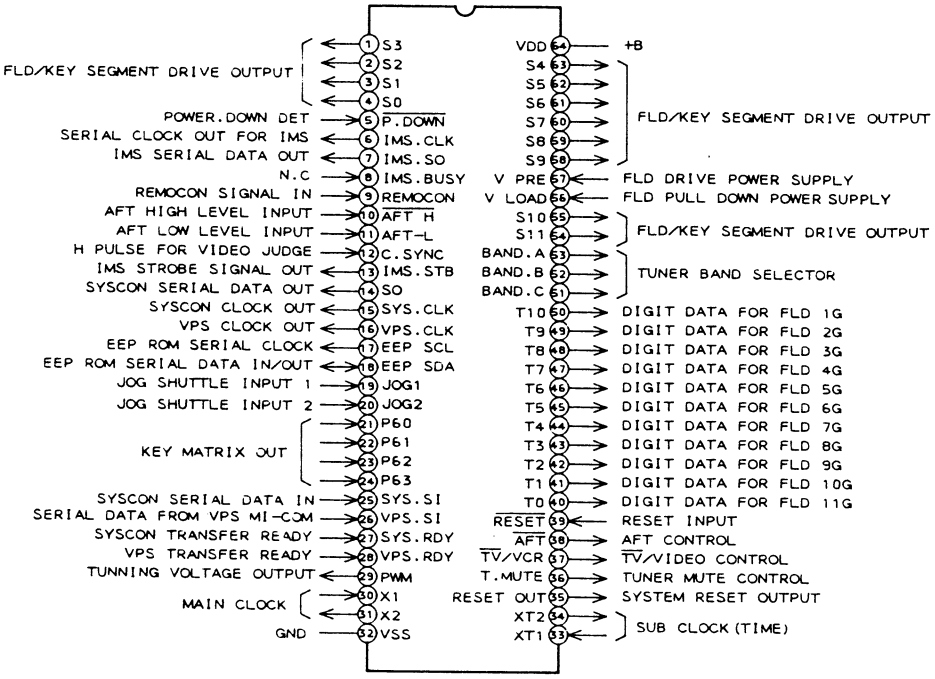
V53C464AP (64 k x 4 BIT D-RAM)


OE 1
WE 4
CAS 16
RAS 5
RAS CLOCK GENERATOR
CAS CLOCK GANERATOR
WE CLOCK GENERATOR
OE CLOCK LOGIC
DATA I/O BUS
COLUMN DECODERS
SENSE AMPLIFIERS
I/O BUFFER
2 I/O 1
3 I/O 2
15 I/O 3
17 I/O 4
X0–X7
REFRESH COUNTER
8
256×4
A0~2
6
8
A3~7
10
14
ADDRESS BUFFERS AND PREDECODERS
X0–X7
ROW DECODERS
256
MEMORY ARRAY

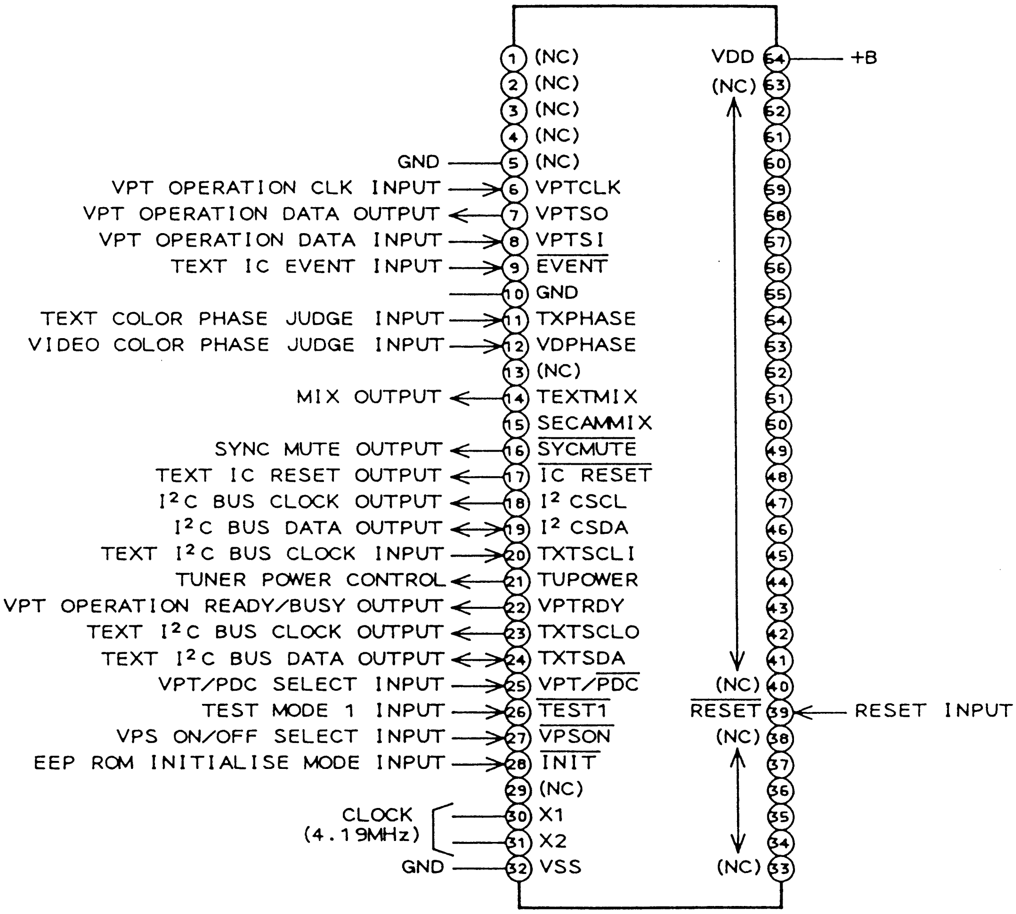
μPD6450 (CHARACTER GENERATOR)


STROBE PULSE INPUT ENABLE (L: ENABLE)
1 BUSY
CLOCK INPUT
2 CLK
STROBE PULSE INPUT
3 STB
DATA INPUT
4 DATA
+5V
5 VDD
INVERTED OSC OUTPUT
6 CK OUT
L, C CONNECTING PIN FOR DOT CLOCK OSC
7 L OSC OUT
L, C CONNECTING PIN FOR DOT CLOCK OSC
8 L OSC IN
GND
9 Vss
VIDEO IN 18
COMPOSITE VIDEO SIGNAL IN
VIDEO OUT 17
COMPOSITE VIDEO SIGNAL OUT
VVL 16
SYNC TIP LEVEL ADJ WHEN INTERNAL MODE
VBL 15
CHARACTER BLACK LEVEL ADJ
VCL 14
CHARACTER WHITE LEVEL ADJ
H SYNC 13
H.SYNC INPUT (LOW ACTIVE)
V SYNC 12
V.SYNC INPUT (LOW ACTIVE)
X OSC OUT 11
CRISTAL CONNECTING PIN
X OSC IN 10
CRISTAL CONNECTING PIN

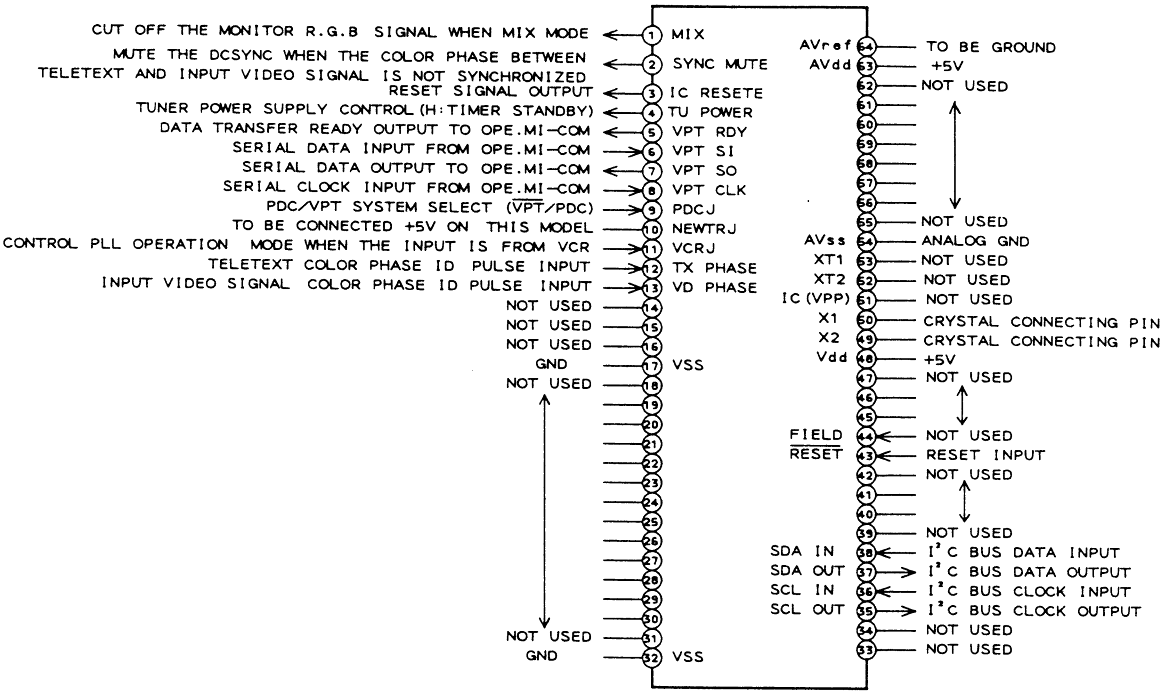
µPD75217CW (OPERATION MI-COM)


FLD/KEY SEGMENT DRIVE OUTPUT
1 S3
2 S2
3 S1
4 S0
POWER.DOWN DET
5 P.DOWN
SERIAL CLOCK OUT FOR IMS
6 IMS.CLK
IMS SERIAL DATA OUT
7 IMS.SO
N.C
8 IMS.BUSY
REMOCON SIGNAL IN
9 REMOCON
AFT HIGH LEVEL INPUT
10 AFT H
AFT LOW LEVEL INPUT
11 AFT-L
H PULSE FOR VIDEO JUDGE
12 C.SYNC
IMS STROBE SIGNAL OUT
13 IMS.STB
SYSCON SERIAL DATA OUT
14 SO
SYSCON CLOCK OUT
15 SYS.CLK
VPS CLOCK OUT
16 VPS.CLK
EEP ROM SERIAL CLOCK
17 EEP SCL
EEP ROM SERIAL DATA IN/OUT
18 EEP SDA
JOG SHUTTLE INPUT 1
19 JOG1
JOG SHUTTLE INPUT 2
20 JOG2
KEY MATRIX OUT
21 P60
22 P61
23 P62
24 P63
SYSCON SERIAL DATA IN
25 SYS.SI
SERIAL DATA FROM VPS MI-COM
26 VPS.SI
SYSCON TRANSFER READY
27 SYS.RDY
VPS TRANSFER READY
28 VPS.RDY
TUNNING VOLTAGE OUTPUT
29 PWM
MAIN CLOCK
30 X1
31 X2
GND
32 VSS
VDD 64
+B
S4 63
S5 62
S6 61
S7 60
S8 59
S9 58
FLD/KEY SEGMENT DRIVE OUTPUT
V PRE 57
FLD DRIVE POWER SUPPLY
V LOAD 56
FLD PULL DOWN POWER SUPPLY
S10 55
S11 54
FLD/KEY SEGMENT DRIVE OUTPUT
BAND.A 53
BAND.B 52
BAND.C 51
TUNER BAND SELECTOR
T10 50
DIGIT DATA FOR FLD 1G
T9 49
DIGIT DATA FOR FLD 2G
T8 48
DIGIT DATA FOR FLD 3G
T7 47
DIGIT DATA FOR FLD 4G
T6 46
DIGIT DATA FOR FLD 5G
T5 45
DIGIT DATA FOR FLD 6G
T4 44
DIGIT DATA FOR FLD 7G
T3 43
DIGIT DATA FOR FLD 8G
T2 42
DIGIT DATA FOR FLD 9G
T1 41
DIGIT DATA FOR FLD 10G
T0 40
DIGIT DATA FOR FLD 11G
RESET 39
RESET INPUT
AFT 38
AFT CONTROL
TV/VCR 37
TV/VIDEO CONTROL
T.MUTE 36
TUNER MUTE CONTROL
RESET OUT 35
SYSTEM RESET OUTPUT
XT2 34
XT1 33
SUB CLOCK (TIME)

µPD75218CW (VPT/PDC MI-COM)


1 (NC)
2 (NC)
3 (NC)
4 (NC)
GND
5 (NC)
VPT OPERATION CLK INPUT
6 VPTCLK
VPT OPERATION DATA OUTPUT
7 VPTSO
VPT OPERATION DATA INPUT
8 VPTSI
TEXT IC EVENT INPUT
9 EVENT
10 GND
TEXT COLOR PHASE JUDGE INPUT
11 TXPHASE
VIDEO COLOR PHASE JUDGE INPUT
12 VDPHASE
13 (NC)
MIX OUTPUT
14 TEXTMIX
15 SECAMMIX
SYNC MUTE OUTPUT
16 SYCMUTE
TEXT IC RESET OUTPUT
17 IC RESET
I2C BUS CLOCK OUTPUT
18 I2 CSCL
I2C BUS DATA OUTPUT
19 I2 CSDA
TEXT I2C BUS CLOCK INPUT
20 TXTSCLI
TUNER POWER CONTROL
21 TUPOWER
VPT OPERATION READY/BUSY OUTPUT
22 VPTRDY
TEXT I2C BUS CLOCK OUTPUT
23 TXTSCLO
TEXT I2C BUS DATA OUTPUT
24 TXTSDA
VPT/PDC SELECT INPUT
25 VPT/PDC
TEST MODE 1 INPUT
26 TEST1
VPS ON/OFF SELECT INPUT
27 VPSON
EEP ROM INITIALISE MODE INPUT
28 INIT
29 (NC)
CLOCK (4.19MHz)
30 X1
31 X2
GND
32 VSS
VDD 64
+B
(NC) 63
62
61
60
59
58
57
56
55
54
53
52
51
50
49
48
47
46
45
44
43
42
41
(NC) 40
RESET 39
RESET INPUT
(NC) 38
37
36
35
34
(NC) 33

μPD78014QXVPT1 (VPT/PDC MI-COM)


CUT OFF THE MONITOR R.G.B SIGNAL WHEN MIX MODE
1 MIX
MUTE THE DCSYNC WHEN THE COLOR PHASE BETWEEN TELETEXT AND INPUT VIDEO SIGNAL IS NOT SYNCHRONIZED
2 SYNC MUTE
RESET SIGNAL OUTPUT
3 IC RESETE
TUNER POWER SUPPLY CONTROL (H:TIMER STANDBY)
4 TU POWER
DATA TRANSFER READY OUTPUT TO OPE.MI-COM
5 VPT RDY
SERIAL DATA INPUT FROM OPE.MI-COM
6 VPT SI
SERIAL DATA OUTPUT TO OPE.MI-COM
7 VPT SO
SERIAL CLOCK INPUT FROM OPE.MI-COM
8 VPT CLK
PDC/VPT SYSTEM SELECT ($\overline{\text{VPT}}$/PDC)
9 PDCJ
TO BE CONNECTED +5V ON THIS MODEL
10 NEWTRJ
CONTROL PLL OPERATION MODE WHEN THE INPUT IS FROM VCR
11 VCRJ
TELETEXT COLOR PHASE ID PULSE INPUT
12 TX PHASE
INPUT VIDEO SIGNAL COLOR PHASE ID PULSE INPUT
13 VD PHASE
NOT USED 14
NOT USED 15
NOT USED 16
GND 17 VSS
NOT USED 18
19
20
21
22
23
24
25
26
27
28
29
30
NOT USED 31
GND 32 VSS
AVref 64 TO BE GROUND
AVdd 63 +5V
62 NOT USED
61
60
59
58
57
56
55 NOT USED
AVss 54 ANALOG GND
XT1 53 NOT USED
XT2 52 NOT USED
IC (VPP) 51 NOT USED
X1 50 CRYSTAL CONNECTING PIN
X2 49 CRYSTAL CONNECTING PIN
Vdd 48 +5V
47 NOT USED
46
45
FIELD 44 NOT USED
$\overline{\text{RESET}}$ 43 RESET INPUT
42 NOT USED
41
40
39 NOT USED
SDA IN 38 I²C BUS DATA INPUT
SDA OUT 37 I²C BUS DATA OUTPUT
SCL IN 36 I²C BUS CLOCK INPUT
SCL OUT 35 I²C BUS CLOCK OUTPUT
34 NOT USED
33 NOT USED